

24

WILLIAMS

FOR INDUSTRY



CATALOG
No. 201

THE BROADEST LINE OF ITS KIND

J. H. WILLIAMS & CO., BUFFALO 7, NEW YORK

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WILLIAMS

DROP-FORGINGS AND
DROP-FORGED TOOLS

N O T I C E - Finishes, materials and designs are subject to change without notice or regard to catalog descriptions.



J. H. WILLIAMS & CO.

ESTABLISHED 1882 — INCORPORATED JULY 1, 1895

**GENERAL OFFICES AND FACTORY
400 VULCAN STREET BUFFALO 7, NEW YORK**

DISTRICT SALES OFFICE
225 Lafayette St., New York 12, N. Y.

DISTRICT SALES OFFICES AND WAREHOUSES

117 North Jefferson Street, Chicago 6, Ill. 2266 East 38th Street, Los Angeles 58, Calif.

Catalog No. 201

DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

Industrial Edition

This Industrial Catalog supersedes all previous issues, which are hereby withdrawn. A separate Catalog covering additional Automotive Service tools is available on request. All Prices are subject to change without notice.

Cuts Illustrating Our Goods

Furnished to customers; if desired, we will edit copy for printer and check proof.

Dimensions

Unless otherwise stated, all dimensions are in inches.

Electric Welding

We are prepared to electric-weld rounds up to and including 1 1/8 inch diameter; by this means we can supply several of our stock specialties, such as Rod Ends, with shanks of any reasonable length.

Heat-treating, Annealing, Tempering and Case-hardening Done to Order

We have ample facilities for handling work of this class and solicit inquiries therefor.

Chemical Analyses and Physical Tests

Our laboratories are thoroughly equipped and we offer their services for such analyzing as may be required.

Estimates for Special Forgings

Furnished on receipt of model or drawing and specifications, including quantity.

Dies for Special Forgings

Charges for Dies and Tools include only a portion of their cost. We assume the risk of breakage and the expense of repair and maintenance. Tools are fitted to our equipment and are not subject to surrender. When inactive for three years after date of last order, they may be discarded at our option, without further notice.

Guarantee

We guarantee all our product, whether Standard Stock goods, as described in this catalog, or Special Forgings made to order, to be free from imperfections of workmanship and material.

Cable Address, "WILLRICH, BUFFALO NY"

Codes: Western Union, Lieber's Standard, Lieber's 5 Letter, "ABC" 5th Edition, Bentley's.

We are the sole makers of the following brands of drop-forged products:

VULCAN
SUPERRENCH
SUPERSOCKET

WILLIAMS

WILLIAMS

AGRIPPA
SUPERECTOR
SUPERJUSTABLE

J. H. Williams & Co., originated the first uniform line of fifteen-degree angle Wrenches, since generally adopted.

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STANDARD SPECIFICATIONS

FOR

WILLIAMS' ♦ "SUPERIOR" DROP-FORGED WRENCHES
(Carbon Steel)

Williams' "Superior" Wrenches, drop-forged from improved quality carbon steel and specially processed to Williams' exacting specifications, are approximately twice as strong as old-fashioned carbon steel wrenches. Over 1000 sizes in a wide range of patterns.



Finish

Openings milled or broached, surface and edges smooth, sizes stamped on heads, hardened and black enameled (baked on)—heads polished bright.

All openings are slightly larger than stated in tables to allow for clearance and variations.

Special Milling

On small quantities where special openings are specified, an extra charge will be made to cover the cost of "setting up" machines. No extra charge will be made for this special work when quantities are sufficient to cover the cost.

A sample Nut or Screw, as gauge, should accompany orders.

Special Wrenches

Made to order. Prices will be quoted upon receipt of models, or drawings and specifications stating kind of finish (see above description) and quantity required.

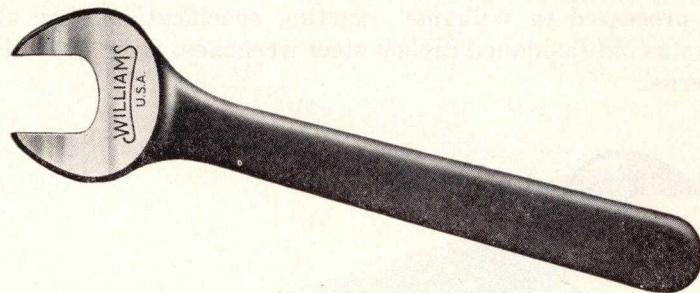
When Ordering

Please use numbers and state whether requirements are for American Standard HEAVY (U.S.S.), American Standard LIGHT (S.A.E.), American Standard REGULAR, Whitworth Standard or m/m openings and condition of finish desired.

WILLIAMS' ♦ "SUPERIOR" ENGINEERS' WRENCHES
(Carbon Steel)

15° Angle, Single Head

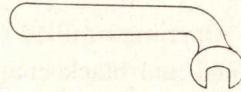
For Standard Nuts and Cap Screws



These Wrenches are milled, surface and edges smooth, sizes stamped on heads, hardened and black enameled (baked on)—heads bright.

Wrenches of this style but with handle tapered will be furnished on orders for the larger sizes, beginning with No. 11.

Handles can be bent above heads at angles of 45° to 90° from opening, at an additional charge; see cut at right.



(Continued on opposite page)

No.	Nominal Opening	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Hex Head Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGULAR Nut; Size Bolt	Extreme Length, Approx.	Weight Each, Lbs.	No.
S 000	3/16	.....	.....	.....	*Nos. 2 & 3	2 1/2	.03	S 000
\$ 00 00	1/4	.....	.....	.....	*No. 4	2 7/8	.05	S 00 00
	5/16	1/8	1/8	.....	*Nos. 5 & 6	3 5/8	.06	
700 0	3/8	.....	3/16	.....	*No. 10	4 1/8	.09	700 0
	13/32	3/16	.....	.....	.....	4 1/8	.08	
701 1	7/16	.....	1/4	1/4	1/4 & *No. 12	4 3/4	.13	701 1
	1/2	1/4	5/16	5/16	.....	4 3/4	.13	
702 2	9/16	.....	3/8	3/8	5/16	5 5/8	.20	702 2
	19/32	5/16	.....	.....	.....	5 5/8	.20	
703 3	5/8	.....	7/16	7/16	3/8	6 1/2	.33	703 3
	11/16	3/8	.....	.....	.....	6 1/2	.33	
704 4	3/4	.....	1/2	1/2	7/16	7 3/8	.44	704 4
	25/32	7/16	.....	.....	.....	7 3/8	.42	
705 5	13/16	.....	9/16	.....	1/2	8 3/8	.64	705 5
	7/8	1/2	5/8	9/16	9/16	8 3/8	.61	
6	15/16	9/16	.....	5/8	.....	9 1/2	.91	6
706	1	.....	3/4	.....	5/8	9 1/2	.89	706

*Amer. Std. Machine-Screw and Stove-Bolt Nuts.

♦ REGISTERED TRADE MARK

(Alloy Steel Wrenches, page 31)

WILLIAMS' ♦ "SUPERIOR" ENGINEERS' WRENCHES
(Carbon Steel)

15° Angle, Single Head
 For Standard Nuts and Cap Screws
(Continued)

Supplied in Whitworth Standard and Metric Measure; see page 212.

The following Wrenches have hole of diameter given below in end of handle:

No. 17	17A	18	18A	19	19A	19B	19C	20	20A	20B	21A	21B	21C	22A	22B
Hole 5/8	5/8	3/4	3/4	7/8	7/8	7/8	7/8	1	1	1	1-1/8	1-1/8	1-1/8	1-1/4	1-1/4"

No.	Nominal Opening	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Hex Head Cap Screw; Diam Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGULAR Nut; Size Bolt	Extreme Length, Approx.	Weight Each, Lbs.	No.
7	1 1/16	5/8	.....	3/4	.....	10 3/4	1.3	7
707	1 1/8	.....	7/8	.....	3/4	10 3/4	1.4	707
8	1 1/4	3/4	(†1)	7/8	.....	12 1/4	2.1	8
8A	1 5/16	.....	1	.....	7/8	12 1/4	2.1	8A
708A	1 3/8	.....	(†1 1/8)	.....	.....	12 1/4	2.	708A
9	1 7/16	7/8	.....	1	.....	13 7/8	2.7	9
709	1 1/2	.....	1 1/8 (†1 1/4)	.....	1	13 7/8	2.7	709
10	1 5/8	1	.....	1 1/8	.....	15 1/2	3.5	10
10A	1 11/16	.....	1 1/4	.....	1 1/8	15 1/2	3.5	10A
11	1 13/16	1 1/8	.....	1 1/4	.....	17 1/8	4.6	11
11A	1 7/8	.....	.....	.....	1 1/4	17 1/8	4.5	11A
12	2	1 1/4	.....	1 3/8	.....	18 7/8	5.8	12
12A	2 1/16	.....	.....	.....	1 3/8	18 7/8	5.8	12A
13	2 3/16	1 3/8	.....	1 1/2	.....	20 3/4	7.2	13
13A	2 1/4	.....	.....	.....	1 1/2	20 3/4	7.2	13A
14	2 3/8	1 1/2	.....	.....	.....	22 3/4	10.	14
14A	2 7/16	.....	.....	.....	1 5/8	22 3/4	9.6	14A
15	2 9/16	1 5/8	.....	.....	.....	24	11.1	15
15A	2 5/8	.....	.....	.....	1 3/4	24	11.2	15A
16	2 3/4	1 3/4	.....	.....	.....	27	13.6	16
16B	2 13/16	.....	.....	.....	1 7/8	27	13.9	16B
16A	2 15/16	1 7/8	.....	.....	.....	27	13.7	16A
17A	3	.....	.....	.....	2	30	18.9	17A
17	3 1/8	2	.....	.....	.....	30	18.9	17
18A	3 3/8	.....	.....	.....	2 1/4	34	28.1	18A
18	3 1/2	2 1/4	.....	.....	.....	34	26.5	18
19B	3 3/4	.....	.....	.....	2 1/2	38	33.1	19B
19	3 7/8	2 1/2	.....	.....	.....	38	33.3	19
19C	4 1/8	.....	.....	.....	2 3/4	38	31.5	19C
19A	4 1/4	2 3/4	.....	.....	.....	38	32.3	19A
20B	4 1/2	.....	.....	.....	3	42	50.5	20B
20	4 5/8	3	.....	.....	.....	42	50.5	20
20A	5	3 1/4	.....	.....	.....	42	50.4	20A
21A	5 3/8	3 1/2	.....	.....	.....	47	90.5	21A
21B	5 3/4	3 3/4	.....	.....	.....	47	90.5	21B
21C	6 1/8	4	.....	.....	.....	47	85.	21C
22A	6 7/8	4 1/2	.....	.....	.....	52	156.	22A
22B	7 5/8	5	.....	.....	.....	52	149.	22B

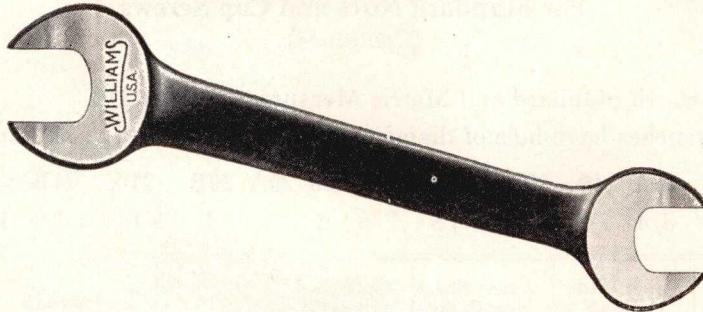
† Old style cap screw—now obsolete.

♦ REGISTERED TRADE MARK

(Alloy Steel Wrenches, page 31)

WILLIAMS' + "SUPERIOR" ENGINEERS' WRENCHES
(Carbon Steel)

15° Angle, Double Head



These Wrenches are milled, surface and edges smooth, sizes stamped on heads, hardened and black enameled (baked on)—heads bright.

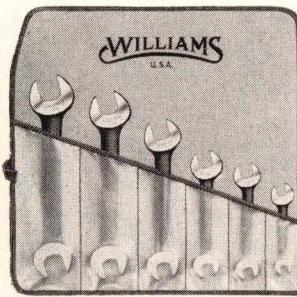
Supplied in Whitworth Standard and Metric Measure; see page 212.

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	Amer. Std. Hex Head Cap Screws; Diam. Screws	Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	Amer. Std. REGULAR Nuts; Size Bolts	Ex- treme Length, Approx.	Weight Each, Lbs.	No.
721	5/16 & 3/8	1/8	1/8 & 3/16	.....	.....	4 1/8	.08	721
21	5/16 & 13/32	1/8 & 3/16	1/8	.....	1/4	4 1/8	.08	21
722	5/16 & 7/16	1/8	1/8 & 1/4	.....	1/4	4 1/2	.11	722
723	3/8 & 7/16	.....	3/16 & 1/4	1/4	1/4	4 1/2	.11	723
723A	3/8 & 1/2	1/4	3/16 & 5/16	5/16	.....	4 7/8	.15	723A
23	13/32 & 1/2	3/16 & 1/4	5/16	5/16	.....	4 7/8	.15	23
24	13/32 & 19/32	3/16 & 5/16	.....	.....	.....	5 1/4	.18	24
725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	5 1/4	.17	725
725A	7/16 & 9/16	.....	1/4 & 3/8	1/4 & 3/8	1/4 & 5/16	5 1/4	.17	725A
725B	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	5 3/4	.17	725B
25	1/2 & 19/32	1/4 & 5/16	5/16	5/16	.....	5 3/4	.22	25
726	1/2 & 5/8	1/4	5/16 & 7/16	5/16 & 7/16	3/8	6 1/4	.30	726
26	1/2 & 11/16	1/4 & 3/8	5/16	5/16	.....	6 1/4	.30	26
727	9/16 & 5/8	.....	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6 1/4	.25	727
27C	9/16 & 11/16	3/8	3/8	3/8	5/16	6 1/2	.34	27C
27	19/32 & 11/16	5/16 & 3/8	.....	.....	.....	6 3/4	.33	27
27B	5/8 & 11/16	3/8	7/16	7/16	3/8	6 3/4	.33	27B
728	9/16 & 3/4	.....	3/8 & 1/2	3/8 & 1/2	5/16 & 7/16	7 1/4	.40	728
28	19/32 & 25/32	5/16 & 7/16	.....	.....	.....	7 1/4	.42	28
28S	5/8 & 25/32	7/16	7/16	7/16	3/8	7 1/4	.40	28S
729	5/8 & 3/4	.....	7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	7 1/4	.39	729
29B	11/16 & 3/4	3/8	1/2	1/2	7/16	7 7/8	.48	29B
29	11/16 & 25/32	3/8 & 7/16	.....	.....	.....	7 7/8	.48	29
29C	11/16 & 13/16	3/8	9/16	.....	1/2	7 7/8	.47	29C
730	5/8 & 13/16	.....	7/16 & 9/16	7/16	3/8 & 1/2	8 1/2	.61	730
30	11/16 & 7/8	3/8 & 1/2	5/8	9/16	9/16	8 1/2	.61	30
731	3/4 & 13/16	.....	1/2 & 9/16	1/2	7/16 & 1/2	9 1/8	.75	731
731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	9 1/8	.75	731A
31B	25/32 & 13/16	7/16	9/16	.....	1/2	9 1/8	.73	31B
31	25/32 & 7/8	7/16 & 1/2	5/8	9/16	9/16	9 1/8	.70	31
731B	13/16 & 7/8	1/2	9/16 & 5/8	9/16	1/2 & 9/16	9 1/8	.75	731B
32B	13/16 & 15/16	9/16	9/16	5/8	1/2	10	.98	32B
33A	7/8 & 15/16	1/2 & 9/16	5/8	9/16 & 5/8	9/16	10	.98	33A
733	7/8 & 1	1/2	5/8 & 3/4	9/16	9/16 & 5/8	10	.97	733
33C	15/16 & 1	9/16	3/4	5/8	5/8	10	.97	33C
34	7/8 & 1 1/16	1/2 & 5/8	5/8	9/16 & 3/4	9/16	11	1.3	34
34A	15/16 & 1 1/16	9/16 & 5/8	.....	5/8 & 3/4	.....	11	1.3	34A
35	31/32 & 1 1/16	9/16 & 5/8	.....	3/4	.....	11	1.4	35
735	1 & 1 1/8	.....	3/4 & 7/8	.....	5/8 & 3/4	11	.88	735
36B	1 1/16 & 1 1/8	5/8	7/8	3/4	3/4	12 3/8	2.	36B
37	1 1/16 & 1 1/4	5/8 & 3/4	.....	3/4 & 7/8	.....	12 3/8	1.9	37
737	1 1/8 & 1 1/4	3/4	7/8	7/8	3/4	12 3/8	2.	737

**WILLIAMS' ♦ "SUPERIOR" ENGINEERS' WRENCHES
(Carbon Steel)**

15° Angle, Double Head—(Continued)

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	Amer. Std. Hex Head Cap Screws; Diam. Screws	Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	Amer. Std. REGULAR Nuts; Size Bolts	Ex-treme Length, Approx.	Weight Each, Lbs.	No.
37A	1 1/8 & 1 5/16	7/8 & 1	3/4 & 7/8	12 3/8	1.9	37A
39B	1 1/4 & 1 5/16	3/4	1	7/8	7/8	14	2.8	39B
39	1 1/4 & 1 7/16	3/4 & 7/8	7/8 & 1	14	2.8	39
39A	1 5/16 & 1 1/2	1 & 1 1/8	7/8 & 1	14	2.7	39A
39C	1 3/8 & 1 7/16	7/8	1	14	2.5	39C
40	1 1/4 & 1 5/8	3/4 & 1	7/8 & 1 1/8	15 3/4	3.7	40
41	1 7/16 & 1 5/8	7/8 & 1	1 & 1 1/8	15 3/4	3.8	41
41B	1 1/2 & 1 5/8	1	1 1/8	1 1/8	15 3/4	3.8	41B
42	1 7/16 & 1 13/16	7/8 & 1 1/8	1 & 1 1/4	17	5.5	42
42A	1 1/2 & 1 11/16	1 1/8 & 1 1/4	1 & 1 1/8	17	5.8	42A
43	1 5/8 & 1 13/16	1 & 1 1/8	1 1/8 & 1 1/4	17	5.8	43
44	1 5/8 & 2	1 & 1 1/4	1 1/8 & 1 3/8	19	7.8	44
44A	1 11/16 & 1 7/8	1 1/4	1 1/8 & 1 1/4	19	7.3	44A
45	1 13/16 & 2	1 1/8 & 1 1/4	1 1/4 & 1 3/8	19	7.1	45
45A	1 7/8 & 2 1/16	.....	.....	1 1/4 & 1 3/8	19	6.7	45A
47	2 & 2 3/16	1 1/4 & 1 3/8	1 3/8 & 1 1/2	21	9.3	47
47B	2 1/16 & 2 1/4	.....	.....	1 3/8 & 1 1/2	21	9.3	47B
48	2 & 2 3/8	1 1/4 & 1 1/2	1 3/8	23	13.	48
49	2 3/16 & 2 3/8	1 3/8 & 1 1/2	1 1/2	23	11.9	49
49A	2 1/4 & 2 7/16	.....	.....	1 1/2 & 1 5/8	23	12.2	49A
51	2 3/8 & 2 9/16	1 1/2 & 1 5/8	.....	.....	25	13.3	51
51A	2 7/16 & 2 5/8	.....	.....	1 5/8 & 1 3/4	25	13.3	51A
53	2 9/16 & 2 3/4	1 5/8 & 1 3/4	.....	.....	27	16.7	53
53A	2 5/8 & 2 13/16	.....	.....	1 3/4 & 1 7/8	27	16.5	53A
54C	2 3/4 & 2 15/16	1 3/4 & 1 7/8	.....	.....	30	23.8	54C
55A	2 13/16 & 3	.....	.....	1 7/8 & 2	32	25.	55A
55B	2 15/16 & 3 1/8	1 7/8 & 2	.....	.....	32	25.	55B
57B	3 & 3 3/8	.....	.....	2 & 2 1/4	36	36.	57B
57	3 1/8 & 3 1/2	2 & 2 1/4	.....	.....	36	37.	57
58A	3 3/8 & 3 3/4	.....	.....	2 1/4 & 2 1/2	38	48.5	58A
58	3 1/2 & 3 7/8	2 1/4 & 2 1/2	.....	.....	38	46.	58
60A	3 3/4 & 4 1/8	.....	.....	2 1/2 & 2 3/4	40	48.	60A
60	3 7/8 & 4 1/4	2 1/2 & 2 3/4	.....	.....	40	48.	60
62A	4 1/8 & 4 1/2	.....	.....	2 3/4 & 3	43	67.	62A
62	4 1/4 & 4 5/8	2 3/4 & 3	.....	.....	43	67.	62
63A	4 5/8 & 5	3 & 3 1/4	.....	.....	47	76.	63A
64A	5 & 5 3/8	3 1/4 & 3 1/2	.....	.....	47	118.	64A



CONTENTS

One each Nos. 723, 25, 727, 29, 731A and 33C with all popular openings 3/8" to 1".

SET No. 25A

In Leatherette Roll

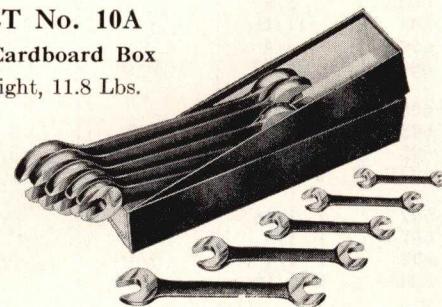
In Cardboard Box

Weight, 3.3 Lbs.

SET No. 10A

In Cardboard Box

Weight, 11.8 Lbs.



CONTENTS

One each Nos. 723, 25, 727, 29, 731, 33A, 735, 37, 39A and 39C with openings 3/8" to 1-7/16".

See Previous Page and Table Above for Individual Wrench Opening and Bolt Size Tabulation.

♦ REGISTERED TRADE MARK

(Alloy Steel Wrenches and Sets, pages 32 and 33)

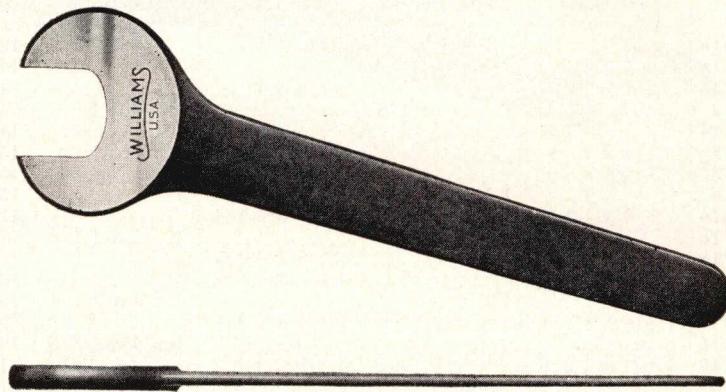
DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

**WILLIAMS' ♦ "SUPERIOR" CHECK NUT,
OR "THIN" WRENCHES
(Carbon Steel)**

15° Angle, Single Head

For Check, Jam, or Lock Nuts, etc.



This class of Wrench is guaranteed amply strong for its intended purpose, but is not designed for severe service.

Supplied in Whitworth Standard and Metric Measure; see page 213.

These Wrenches are milled, surface and edges smooth, sizes stamped on heads, hardened and black enameled (baked on)—heads bright.

No.	Nominal Opening	Amer. Std. HEAVY Jam Nut (U.S.S.); Size Bolt	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGULAR Jam Nut; Size Bolt	Extreme Length, Approx.	Thickness Head	Weight Each, Lbs.	No.
601A	7/16	.....	1/4	1/4	4	5/32	.08	601A
601	1/2	1/4	5/16	.....	4	5/32	.08	601
602A	9/16	.....	3/8	5/16	4 1/2	11/64	.12	602A
602	19/32	5/16	.....	.....	4 1/2	11/64	.12	602
603A	5/8	.....	7/16	3/8	5 1/8	3/16	.16	603A
603	11/16	3/8	.....	.....	5 1/8	3/16	.16	603
604A	3/4	.....	1/2	7/16	5 7/8	7/32	.23	604A
604	25/32	7/16	.....	.....	5 7/8	7/32	.23	604
605A	13/16	.....	.....	1/2	6 5/8	1/4	.33	605A
605	7/8	1/2	9/16	9/16	6 5/8	1/4	.33	605
606	15/16	9/16	5/8	.....	7 1/2	9/32	.48	606
606B	1	.....	.....	5/8	7 1/2	9/32	.48	606B
607	1 1/16	5/8	3/4	.....	8 1/2	5/16	.66	607
607A	1 1/8	.....	.....	3/4	8 1/2	5/16	.66	607A
608	1 1/4	3/4	7/8	.....	10	3/8	1.1	608
608A	1 5/16	.....	.....	7/8	10	3/8	1.1	608A
609	1 7/16	7/8	1	.....	11 5/8	7/16	1.6	609
609A	1 1/2	.....	.....	1	11 5/8	7/16	1.6	609A
610	1 5/8	1	1 1/8	.....	13 1/4	1/2	2.5	610
610A	1 11/16	.....	.....	1 1/8	13 1/4	1/2	2.5	610A

♦ REGISTERED TRADE MARK

1-52

DROP-FORGINGS AND

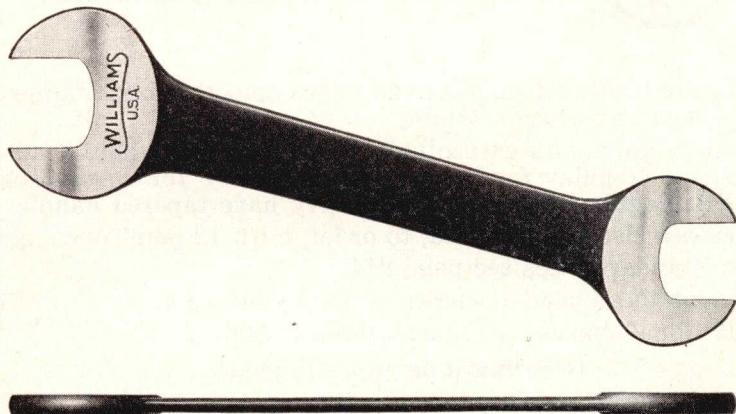
WILLIAMS

DROP-FORGED TOOLS

**WILLIAMS' ♦ "SUPERIOR" CHECK NUT,
OR "THIN" WRENCHES
(Carbon Steel)**

15° Angle, Double Head

For Check, Jam, or Lock Nuts, etc.



For description, see opposite page. Whitworth and Metric sizes, see page 213.

No.	Nominal Openings	Amer. Std. HEAVY Jam Nuts (U.S.S.); Size Bolts	Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	Amer. Std. REGULAR Jam Nuts; Size Bolts	Extreme Length Approx.	Thick- ness Heads	Weight Each, Lbs.	No.
623	13/32 & 1/2	3/16 & 1/4	5/16	.....	4 5/8	5/32	.13	623
623D	7/16 & 1/2	1/4	1/4 & 5/16	1/4	4 5/8	5/32	.08	623D
624A	7/16 & 9/16	.....	1/4 & 3/8	1/4 & 5/16	4 3/4	5/32	.11	624A
624B	1/2 & 9/16	1/4	5/16 & 3/8	5/16	4 3/4	5/32	.11	624B
625	1/2 & 19/32	1/4 & 5/16	5/16	.....	4 3/4	5/32	.11	625
626S	9/16 & 5/8	.....	3/8 & 7/16	5/16 & 3/8	6	3/16	.17	626S
627	19/32 & 11/16	5/16 & 3/8	.....	.....	6	3/16	.19	627
629D	5/8 & 3/4	.....	7/16 & 1/2	3/8 & 7/16	6 3/4	3/16	.23	629D
629	11/16 & 25/32	3/8 & 7/16	.....	.....	6 3/4	3/16	.23	629
630	11/16 & 7/8	3/8 & 1/2	9/16	9/16	7 1/2	7/32	.36	630
630B	3/4 & 13/16	.....	1/2	7/16 & 1/2	7 1/2	7/32	.33	630B
630E	3/4 & 7/8	1/2	1/2 & 9/16	7/16 & 9/16	7 1/2	7/32	.33	630E
631	25/32 & 7/8	7/16 & 1/2	9/16	.....	7 1/2	7/32	.34	631
631A	13/16 & 7/8	1/2	9/16	1/2 & 9/16	7 1/2	7/32	.34	631A
632C	7/8 & 15/16	1/2 & 9/16	9/16 & 5/8	9/16	8 3/4	1/4	.36	632C
634A	7/8 & 1	1/2	9/16	9/16 & 5/8	8 7/8	1/4	.59	634A
634	7/8 & 1 1/16	1/2 & 5/8	9/16 & 3/4	9/16	8 7/8	1/4	.54	634
632X	15/16 & 1	.....	5/8	5/8	8 7/8	1/4	.57	632X
634B	15/16 & 1 1/16	9/16 & 5/8	5/8 & 3/4	.....	8 7/8	1/4	.59	634B
635D	1 & 1 1/8	.....	5/8 & 3/4	10 1/2	9/32	.95	635D	
637	1 1/16 & 1 1/4	5/8 & 3/4	3/4 & 7/8	10 1/2	9/32	.89	637	
637A	1 1/8 & 1 5/16	.....	3/4 & 7/8	10 1/2	9/32	.89	637A	
639	1 1/4 & 1 7/16	3/4 & 7/8	7/8 & 1	.....	12 1/2	3/8	1.7	639
640	1 1/4 & 1 5/8	3/4 & 1	7/8 & 1 1/8	.....	12 1/2	3/8	1.8	640
640A	1 5/16 & 1 1/2	.....	7/8 & 1	12 1/2	3/8	1.6	640A	

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "SUPERIOR" HEX-BOX WRENCHES
(Carbon Steel)

REGULAR PATTERN — 15° Angle



These Wrenches are broached, surface and edges smooth, sizes stamped, hardened and black enameled (baked on)—heads bright.

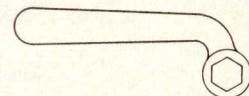
Designed for use requiring an exceedingly strong tool and where head clearance is limited. Two Patterns—Regular for general work, Heavy for severe service. Wrenches larger than No. 810 Regular and No. H809 Heavy have tapered handle.

These Wrenches can also be furnished, to order, with 12-point openings.

For Whitworth Standard sizes see page 214.

Handle can be bent above head at angles of 45° to 90° from opening, at an additional charge; see illustration at right.

(Continued on opposite page)



No.	Nominal Opening Across Flats	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Hd. Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGLR. Nut	Extreme Length, Approx.	Head		Weight Each, Lbs.	No.
							Thickness	Outside Diam.		
800	13/32	3/16	3/16	.....	.....	3 1/2	7/32	45/64	.08	800
801A	7/16	.....	1/4	1/4	1/4	4	17/64	27/32	.11	801A
801	1/2	1/4	5/16	.....	.....	4	17/64	27/32	.11	801
802A	9/16	.....	3/8	3/8	5/16	4 7/8	5/16	63/64	.17	802A
802	19/32	5/16	.....	.....	.....	4 7/8	5/16	63/64	.17	802
803A	5/8	.....	7/16	7/16	3/8	5 7/8	23/64	1 9/64	.25	803A
803	11/16	3/8	.....	.....	.....	5 7/8	23/64	1 9/64	.25	803
804A	3/4	.....	1/2	1/2	7/16	6 7/8	13/32	1 9/32	.38	804A
804	25/32	7/16	.....	.....	.....	6 7/8	13/32	1 9/32	.38	804
805A	13/16	.....	9/16	.....	1/2	7 3/4	29/64	1 27/64	.52	805A
805	7/8	1/2	5/8	9/16	9/16	7 3/4	29/64	1 27/64	.52	805
806	15/16	9/16	.....	5/8	.....	8 3/4	1/2	1 19/32	.69	806
806B	1	.....	3/4	.....	5/8	8 3/4	1/2	1 19/32	.69	806B
807	1 1/16	5/8	.....	3/4	.....	9 7/8	9/16	1 25/32	.95	807
807A	1 1/8	.....	7/8	.....	3/4	9 7/8	9/16	1 25/32	.95	807A
808	1 1/4	3/4	.....	7/8	.....	11 1/2	9/16	2 1/16	1.4	808
808A	1 5/16	.....	1	.....	7/8	11 1/2	9/16	2 1/16	1.4	808A
809	1 7/16	7/8	.....	1	.....	13 3/8	21/32	2 3/8	2.	809
809A	1 1/2	.....	1 1/8	.....	1	13 3/8	21/32	2 3/8	2.	809A
810	1 5/8	1	.....	1 1/8	.....	15 1/4	3/4	2 5/8	2.9	810
810A	1 11/16	.....	1 1/4	.....	1 1/8	15 1/4	3/4	2 5/8	2.9	810A
811	1 13/16	1 1/8	.....	1 1/4	.....	17 1/8	13/16	2 29/32	3.1	811
811A	1 7/8	.....	.....	.....	1 1/4	17 1/8	13/16	2 29/32	3.1	811A
812	2	.....	1 1/4	.....	1 3/8	19	15/16	3 1/4	4.3	812
813	2 3/16	1 3/8	.....	1 1/2	.....	21	1	3 31/64	5.8	813
813A	2 1/4	.....	.....	.....	1 1/2	21	1	3 31/64	5.8	813A
814	2 3/8	1 1/2	.....	.....	.....	23	1 1/16	3 23/32	7.3	814
815	2 9/16	1 5/8	.....	.....	.....	25	1 1/8	4 3/32	8.9	815
815A	2 5/8	.....	.....	.....	1 3/4	25	1 1/8	4 3/32	8.9	815A
816	2 3/4	1 3/4	.....	.....	.....	27	1 1/4	4 9/16	11.9	816
817A	3	.....	.....	.....	2	30	1 3/8	4 53/64	16.2	817A
817	3 1/8	2	.....	.....	.....	30	1 3/8	4 53/64	16.2	817

WILLIAMS' ♦ "SUPERIOR" HEX-BOX WRENCHES
(Carbon Steel)

REGULAR PATTERN—15° Angle

(Continued)

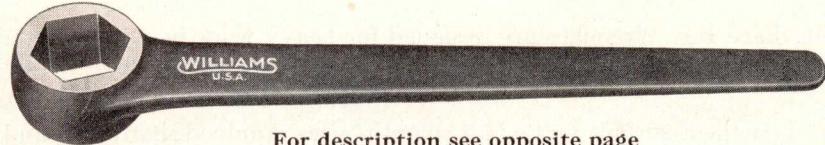
The following long Wrenches have hole of size given below in end of handle:

Number,	817	817A	818	818A	819	819A	819AC	819B	820	820B
Hole; diam.	5/8	5/8	3/4	3/4	7/8	7/8	7/8	7/8	1	1 inch

No.	Nominal Opening Across Flats	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. REGULAR Nut	Extreme Length, Approx.	Head		Weight Each, Lbs.	No.
					Thickness	Outside Diam.		
818A	3 3/8	.....	2 1/4	34	1 1/2	5 1/4	20.3	818A
818	3 1/2	2 1/4	.....	34	1 1/2	5 1/4	20.3	818
819B	3 3/4	.....	2 1/2	38	1 5/8	5 7/8	24.6	819B
819	3 7/8	2 1/2	.....	38	1 5/8	5 7/8	24.5	819
819AC	4 1/8	.....	2 3/4	42	1 3/4	6 1/2	34.8	819AC
819A	4 1/4	2 3/4	.....	42	1 3/4	6 1/2	34.5	819A
820B	4 1/2	.....	3	46	1 7/8	7	41.5	820B
820	4 5/8	3	.....	46	1 7/8	7	41.5	820

WILLIAMS' ♦ "SUPERIOR" HEX-BOX WRENCHES
(Carbon Steel)

HEAVY PATTERN — 15° Angle



For description see opposite page

No.	Nominal Opening Across Flats	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Hd. Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGLR. Nut	Extreme Length, Approx.	Head		Weight Each, Lbs.	No.
							Thickness	Outside Diam.		
H808	1 1/4	3/4	.....	7/8	.....	11 1/2	13/16	2 1/16	1.6	H808
H808A	1 5/16	.....	1	.....	7/8	11 1/2	13/16	2 1/16	1.6	H808A
H809	1 7/16	7/8	.....	1	.....	13 3/8	15/16	2 3/8	2.5	H809
H809A	1 1/2	.....	1 1/8	.....	1	13 3/8	15/16	2 3/8	2.5	H809A
H810	1 5/8	1	.....	1 1/8	.....	15 1/4	1 1/8	2 5/8	3.1	H810
H810A	1 11/16	.....	1 1/4	.....	1 1/8	15 1/4	1 1/8	2 5/8	3.1	H810A
H811	1 13/16	1 1/8	.....	1 1/4	.....	17	1 1/4	2 15/16	3.8	H811
H811A	1 7/8	.....	.....	.....	1 1/4	17	1 1/4	2 15/16	3.8	H811A
H812	2	1 1/4	.....	1 3/8	.....	19	1 3/8	3 1/4	5.2	H812
H813	2 3/16	1 3/8	.....	1 1/2	.....	21	1 1/2	3 1/2	6.5	H813
H813A	2 1/4	.....	.....	.....	1 1/2	21	1 1/2	3 1/2	6.5	H813A
H814	2 3/8	1 1/2	.....	.....	.....	23	1 5/8	3 3/4	6.3	H814
H815	2 9/16	1 5/8	.....	.....	.....	25	1 3/4	4 1/8	10.3	H815
H815A	2 5/8	.....	.....	.....	1 3/4	25	1 3/4	4 1/8	10.3	H815A
H816	2 3/4	1 3/4	.....	.....	.....	27	1 7/8	4 9/16	13.8	H816
H817A	3	.....	.....	.....	2	30	2	4 13/16	17.9	H817A
H817	3 1/8	2	.....	.....	.....	30	2	4 13/16	17.9	H817

♦ REGISTERED TRADE MARK

(Alloy Steel Wrenches, pages 43 and 44)

WILLIAMS' ♦ "SUPERIOR" HEX-BOX WRENCHES
(Carbon Steel)

STRIKING FACE PATTERN — 15° Angle



These Striking Face Box Wrenches are designed for heavy work in close quarters where large nuts must be set up tight, or frozen nuts loosened.

Wrenches are broached, surface and edges smooth, sizes stamped, hardened and black enameled (baked on)—heads bright.

No.	Nominal Opening Across Flats	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGULAR Nut	Ex- treme Length Approx.	Head		Wgt. Each, Lbs.
							Thick- ness	Outside Diam.	
SF-818A	3 3/8	.....	.....	.....	2 1/4	18	1 1/2	5 1/4	19.3
SF-818	3 1/2	2 1/4	.....	.....	.....	18	1 1/2	5 1/4	18.8
SF-819B	3 3/4	.....	.....	.....	2 1/2	19	1 5/8	5 7/8	23.6
SF-819	3 7/8	2 1/2	.....	.....	.....	19	1 5/8	5 7/8	23.6
SF-819AC	4 1/8	.....	.....	.....	2 3/4	20	1 3/4	6 1/2	25.3
SF-819A	4 1/4	2 3/4	.....	.....	.....	20	1 3/4	6 1/2	25.3
SF-820B	4 1/2	.....	.....	.....	3	21	1 7/8	7	29.5
SF-820	4 5/8	3	.....	.....	.....	21	1 7/8	7	29.5

♦ REGISTERED TRADE MARK

(Alloy Steel Wrenches, pages 46 and 47)

1-52

DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPERIOR" SQUARE BOX WRENCHES
(Carbon Steel)

22-1/2° Angle, Single Head

For Set Screws, Square Cap Screws and Nuts



These Wrenches are broached, surface and edges smooth, sizes stamped, hardened and black enameled (baked on)—heads bright.

These Wrenches can also be furnished, to order, with 8-point openings.

No.	Nominal Opening	For Set Screw; Size	For Square Head Cap Screw	Amer. Std. REGLR. Square Nut	Extreme Length, Approx.	Head		Weight Each, Lbs.	No.
						Thickness	Outside Diam.		
580	3/16	3/16	.....	.....	3	1/4	1/2	.05	580
581	1/4	1/4	.....	.....	3 3/8	9/32	5/8	.08	581
582	5/16	5/16	.....	.....	3 3/4	5/16	11/16	.11	582
583	3/8	3/8	1/4	.....	4 1/4	3/8	27/32	.17	583
584	7/16	7/16	5/16	1/4	4 7/8	7/16	31/32	.25	584
585	1/2	1/2	3/8	.....	5 1/2	15/32	1 1/16	.33	585
586	9/16	9/16	7/16	5/16	6 1/4	1/2	1 3/16	.42	586
587	5/8	5/8	1/2	3/8	7	9/16	1 5/16	.61	587
588	3/4	3/4	5/8	7/16	8	5/8	1 9/16	.83	588
589	7/8	7/8	3/4	9/16	9	11/16	1 25/32	1.2	589
590	1	1	.....	5/8	10	3/4	2	1.6	590

♦ REGISTERED TRADE MARK

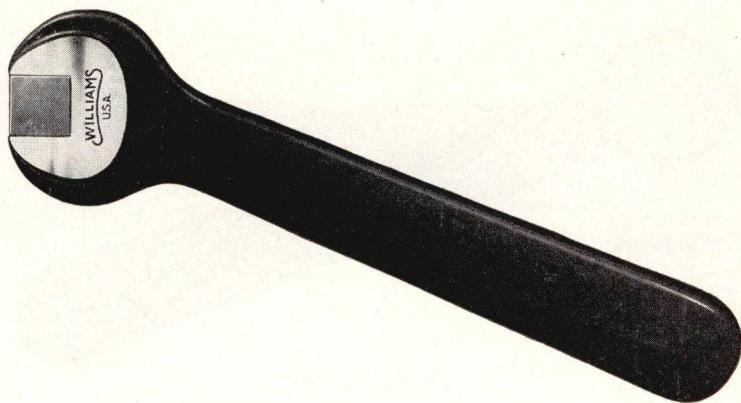
DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPERIOR" SET SCREW WRENCHES
(Carbon Steel)

22 1/2° Angle, Single Head

For Set Screws, Square Cap Screws and Nuts



These Wrenches are milled, surface and edges smooth, sizes stamped on heads, hardened, black enameled (baked on)—heads bright.

No.	Nominal Opening	For Set Screw; Size	For Square Head Cap Screw	For Amer. Std. REGULAR Square Nut	Extreme Length, Approx.	Thickness Head	Weight Each, Lbs.	No.
500	3/16	3/16	.....	.....	3	3/16	.04	500
501	1/4	1/4	.....	.....	3 1/2	1/4	.09	501
502	5/16	5/16	.....	.....	4 1/4	5/16	.16	502
503	3/8	3/8	1/4	.....	5	11/32	.25	503
504	7/16	7/16	5/16	1/4	5 3/4	3/8	.36	504
505	1/2	1/2	3/8	.....	6 5/8	7/16	.50	505
506	9/16	9/16	7/16	5/16	7 1/2	1/2	.75	506
507	5/8	5/8	1/2	3/8	8 1/2	9/16	.89	507
508	3/4	3/4	5/8	7/16	9 1/2	5/8	1.3	508
509	7/8	7/8	3/4	9/16	10 1/2	11/16	1.5	509
510	1	1	.....	5/8	11 1/2	3/4	2.1	510
511	1 1/8	1 1/8	7/8	3/4	12 1/2	13/16	2.5	511

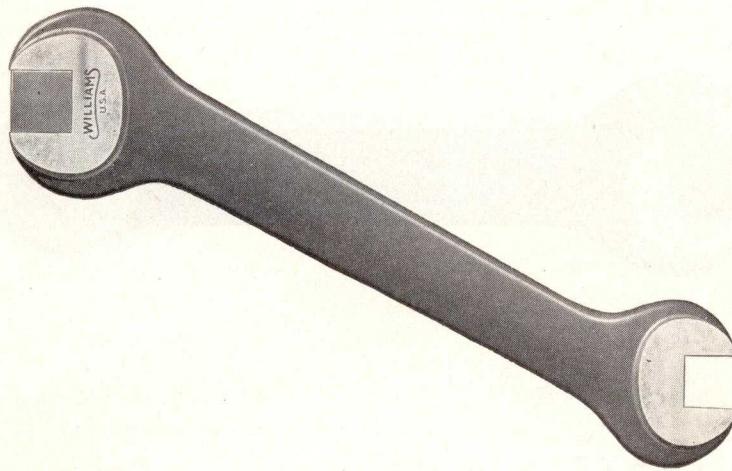
♦ REGISTERED TRADE MARK

1-52

WILLIAMS' ♦ "SUPERIOR" SET SCREW WRENCHES
(Carbon Steel)

22 1/2° Angle, Double Head

For Set Screws, Square Cap Screws and Nuts



These Wrenches are milled, surface and edges smooth, sizes stamped on heads, hardened and black enameled (baked on)—heads bright.

No.	Nominal Openings	For Set Screws; Size	For Square Head Cap Screws; Diam. Screws	For Amer. Std. REGULAR Square Nuts	Ex-treme Length, Approx.	Thick-ness Heads	Weight Each, Lbs.	No.
523	3/16 & 1/4	3/16 & 1/4	.....	.....	3 1/2	7/32	.06	523
524	3/16 & 5/16	3/16 & 5/16	.....	.....	4 1/4	9/32	.13	524
525	1/4 & 5/16	1/4 & 5/16	.....	.....	4 1/4	9/32	.14	525
526	1/4 & 3/8	1/4 & 3/8	1/4	.....	5	11/32	.20	526
527	5/16 & 3/8	5/16 & 3/8	1/4	.....	5	11/32	.23	527
529	3/8 & 7/16	3/8 & 7/16	1/4 & 5/16	1/4	5 3/4	3/8	.33	529
530	3/8 & 1/2	3/8 & 1/2	1/4 & 3/8	.....	6 5/8	7/16	.53	530
531	7/16 & 1/2	7/16 & 1/2	5/16 & 3/8	1/4	6 5/8	7/16	.50	531
533	1/2 & 9/16	1/2 & 9/16	3/8 & 7/16	5/16	7 1/2	1/2	.71	533
534	1/2 & 5/8	1/2 & 5/8	3/8 & 1/2	3/8	8 1/2	9/16	1.	534
535	9/16 & 5/8	9/16 & 5/8	7/16 & 1/2	5/16 & 3/8	8 1/2	9/16	.95	535
537	5/8 & 3/4	5/8 & 3/4	1/2 & 5/8	3/8 & 7/16	9 3/4	5/8	1.5	537
539	3/4 & 7/8	3/4 & 7/8	5/8 & 3/4	7/16 & 9/16	11	11/16	1.8	539
541	7/8 & 1	7/8 & 1	3/4	9/16 & 5/8	12 1/2	3/4	2.6	541
543	1 & 1 1/8	1 & 1 1/8	7/8	5/8 & 3/4	14	13/16	3.6	543

♦ REGISTERED TRADE MARK

DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPERIOR" TOOL POST WRENCHES
(Carbon Steel)

For Set Screws



These Wrenches are milled and broached, surface and edges smooth, sizes stamped on heads, hardened and black enameled (baked on)—heads bright.

No.	Open End for Set Screw; Size	Closed End for Set Screw; Size	Extreme Length, Approx.	Thickness Heads	Weight Each, Lbs.	No.
554	7/16	7/16	5 1/2	1/2	.45	554
555	1/2	1/2	6	9/16	.56	555
555B	9/16	1/2	6	9/16	.56	555B
555C	9/16	9/16	6	9/16	.56	555C
556	5/8	5/8	7	5/8	.80	556
556B	11/16	5/8	7	5/8	.80	556B
556C	11/16	11/16	7	5/8	.80	556C
557	3/4	3/4	7 5/8	11/16	.94	557

WILLIAMS' ♦ "SUPERIOR" TOOL POST WRENCHES
(Carbon Steel)

For Nuts and Set Screws



These Wrenches are milled and broached, surface and edges smooth, sizes stamped on heads, hardened and black enameled (baked on)—heads bright.

Whitworth Standard sizes, see page 214.

No.	Open End Nominal Opening	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. REGULAR Nut Size Bolt	Closed End for Set Screw; Size	Extreme Length, Approx.	Thickness Heads	Weight Each, Lbs.	No.
562B	5/8	.....	3/8	9/16	6 1/2	1/2	.72	562B
562	11/16	3/8	.....	9/16	6 1/2	1/2	.72	562
563E	13/16	.....	1/2	7/16	7	9/16	.84	563E
563F	13/16	.....	1/2	1/2	7	9/16	.84	563F
563G	13/16	.....	1/2	9/16	7	9/16	.84	563G
563H	13/16	.....	1/2	5/8	7	9/16	.84	563H
563	7/8	1/2	9/16	7/16	7	9/16	.84	563
563B	7/8	1/2	9/16	1/2	7	9/16	.84	563B
563C	7/8	1/2	9/16	9/16	7	9/16	.84	563C
563D	7/8	1/2	9/16	5/8	7	9/16	.84	563D
564C	1	.....	5/8	5/8	7 1/2	5/8	1.1	564C
564	1 1/16	5/8	.....	5/8	7 1/2	5/8	1.1	564
565C	1	.....	5/8	3/4	8	5/8	1.2	565C
565	1 1/16	5/8	.....	3/4	8	5/8	1.2	565
566C	1 1/8	.....	3/4	3/4	9 1/4	3/4	1.6	566C
566D	1 1/8	.....	3/4	7/8	9 1/4	3/4	1.6	566D
566	1 1/4	3/4	.....	3/4	9 1/4	3/4	1.6	566
566B	1 1/4	3/4	.....	7/8	9 1/4	3/4	1.6	566B
567D	1 1/8	.....	3/4	1	10	7/8	2.5	567D
567	1 1/4	3/4	.....	1	10	7/8	2.5	567
567E	1 5/16	.....	7/8	7/8	10	7/8	2.5	567E
567F	1 5/16	.....	7/8	1	10	7/8	2.5	567F
567B	1 7/16	7/8	.....	7/8	10	7/8	2.5	567B
567C	1 7/16	7/8	.....	1	10	7/8	2.5	567C
568E	1 1/2	.....	1	7/8	11	15/16	3.3	568E
568F	1 1/2	.....	1	1	11	15/16	3.3	568F
568	1 5/8	1	.....	7/8	11	15/16	3.3	568
568B	1 5/8	1	.....	1	11	15/16	3.3	568B
568G	1 11/16	.....	1 1/8	1	11	15/16	3.3	568G
568H	1 7/8	.....	1 1/4	1	11	15/16	3.3	568H
568C	1 13/16	1 1/8	.....	1	11	15/16	3.3	568C
568D	2	1 1/4	.....	1	11	15/16	3.3	568D

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "SUPERIOR" STRUCTURAL WRENCHES
(Carbon Steel)

Straight Opening



The jaws of these Wrenches are narrow and long, providing substantially full bearing on square nuts. The long handle is round for the greater part of its length, with tapered end for easy insertion into bolt holes when bringing them into line.

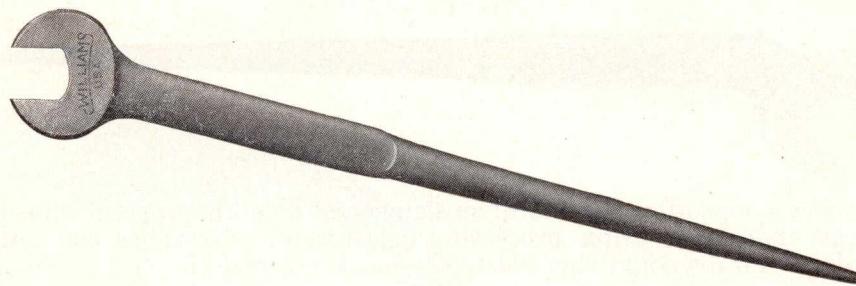
The abrupt offset and angle of handle provide for clearance of obstructions, even when these are close to the head, and safety to the operator's hands. The wrench is particularly well balanced. When thrust into slit of scabbard or belt-loop the "step-up" of the round above the flat part of handle acts as a stop. It retains the wrench, yet allows its ready release.

Milled, sizes stamped, hardened all over and shot-blasted — heads not bright. Whitworth Standard sizes, see page 214.

No.	Nominal Opening	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. REGLR. Nut; Size Bolt	Extreme Length, Approx.	Thickness Head	Handle Offset		Weight Each, Lbs.	No.
						At Head	At End		
901A	7/16	.....	1/4	9 1/2	11/32	13/16	1 1/2	.33	901A
901	1/2	1/4	.....	9 1/2	11/32	13/16	1 1/2	.33	901
901B	9/16	.....	5/16	9 1/2	11/32	13/16	1 1/2	.33	901B
902	19/32	5/16	.....	9 1/2	11/32	13/16	1 1/2	.33	902
903A	5/8	.....	3/8	12	7/16	7/8	1 11/16	.63	903A
903	11/16	3/8	.....	12	7/16	7/8	1 11/16	.63	903
904A	3/4	.....	7/16	12	7/16	7/8	1 11/16	.61	904A
904	25/32	7/16	.....	12	7/16	7/8	1 11/16	.61	904
905A	13/16	.....	1/2	14 1/2	17/32	1	1 7/8	1.2	905A
905	7/8	1/2	9/16	14 1/2	17/32	1	1 7/8	1.2	905
906	15/16	9/16	.....	14 1/2	17/32	1	1 7/8	1.2	906
906B	1	.....	5/8	14 1/2	17/32	1	1 7/8	1.2	906B
907	1 1/16	5/8	.....	17	5/8	1 1/8	2 3/8	1.9	907
907A	1 1/8	.....	3/4	17	5/8	1 1/8	2 3/8	1.9	907A
908	1 1/4	3/4	.....	19	11/16	1 1/4	2 3/4	2.9	908
908A	1 5/16	.....	7/8	19	11/16	1 1/4	2 3/4	2.9	908A
909	1 7/16	7/8	.....	21	3/4	1 3/8	3 1/16	4.	909
909A	1 1/2	.....	1	21	3/4	1 3/8	3 1/16	4.	909A
910	1 5/8	1	.....	23	13/16	1 1/2	3 3/8	5.3	910
910A	1 11/16	.....	1 1/8	23	13/16	1 1/2	3 3/8	5.3	910A
911	1 13/16	1 1/8	.....	25	7/8	1 5/8	3 11/16	7.4	911
911A	1 7/8	.....	1 1/4	25	7/8	1 5/8	3 11/16	7.4	911A
912	2	1 1/4	.....	25	7/8	1 5/8	3 11/16	7.4	912

WILLIAMS' ♦ "SUPERIOR" CONSTRUCTION WRENCHES
(Carbon Steel)

15° Angle



These Wrenches with deep opening provide substantial bearing on square nuts. The long handle is round for the greater part of its length, with tapered end for easy insertion into bolt holes when bringing them into line.

Milled, sizes stamped, hardened all over and shot-blasted — heads not bright.

Whitworth Standard sizes, see page 214.

No.	Nominal Opening	For Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Amer. Std. REGULAR Nut Size Bolt	Extreme Length, Approx.	Thickness Head	Weight Each, Lbs.	No.
201A	7/16	.....	1/4	9 1/2	3/8	.27	201A
201	1/2	1/4	.....	9 1/2	3/8	.27	201
201B	9/16	.....	5/16	9 1/2	3/8	.27	201B
202	19/32	5/16	.....	9 1/2	3/8	.27	202
203A	5/8	.....	3/8	12	7/16	.53	203A
203	11/16	3/8	.....	12	7/16	.53	203
204A	3/4	.....	7/16	12	7/16	.50	204A
204	25/32	7/16	.....	12	7/16	.50	204
205A	13/16	.....	1/2	14 1/2	17/32	1.	205A
205	7/8	1/2	9/16	14 1/2	17/32	1.	205
206	15/16	9/16	.....	14 1/2	17/32	1.	206
206B	1	.....	5/8	14 1/2	17/32	1.	206B
207	1 1/16	5/8	.....	17	5/8	1.7	207
207A	1 1/8	.....	3/4	17	5/8	1.7	207A
208	1 1/4	3/4	.....	19	11/16	2.6	208
208A	1 5/16	.....	7/8	19	11/16	2.6	208A
209	1 7/16	7/8	.....	21	3/4	3.7	209
209A	1 1/2	.....	1	21	3/4	3.7	209A
210	1 5/8	1	.....	23	27/32	5.3	210
210A	1 11/16	.....	1 1/8	23	27/32	5.2	210A
211	1 13/16	1 1/8	.....	25	15/16	7.3	211
211A	1 7/8	.....	1 1/4	25	15/16	7.2	211A
212	2	1 1/4	.....	25	15/16	7.3	212

♦ REGISTERED TRADE MARK

(Alloy Steel Wrenches, page 38)

DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPERIOR" CONSTRUCTION WRENCHES
(Carbon Steel)

15° Angle
45° BENT HANDLE



These wrenches are particularly useful on flange and pipe line work in refineries, chemical plants and industries using processing equipment. Wrenches are milled, sizes stamped, hardened all over and shot-blasted — heads not bright.

No.	Nominal Opening	For U. S. Std. Nut; Size Bolt	For S.A.E. Std. Nut and Cap Screw	For Amer. Std. Reg. Nut; Size Bolt	Extreme Length, Approx.	Weight Each, Lbs.
X-205	7/8	1/2	9/16	9/16	14	1.
X-207	1 1/16	5/8	3/4	.....	16 1/2	1.7
X-208	1 1/4	3/4	7/8	.....	18 1/2	2.6
X-209	1 7/16	7/8	1	.....	20 3/8	3.7
X-210	1 5/8	1	1 1/8	.....	22 1/4	5.3
X-211	1 13/16	1 1/8	1 1/4	.....	24	7.3
X-212	2	1 1/4	1 3/8	.....	24	7.3

WILLIAMS' ♦ "SUPERIOR" CONSTRUCTION WRENCHES
(Carbon Steel)

15° Angle
90° BENT HANDLE



Wrenches are milled, sizes stamped, hardened all over and shot-blasted — heads not bright.

No.	Nominal Opening	For U. S. Std. Nut; Size Bolt	For S.A.E. Std. Nut and Cap Screw	For Amer. Std. Reg. Nut; Size Bolt	Extreme Length, Approx.	Weight Each, Lbs.
Z-205	7/8	1/2	9/16	9/16	12	1.
Z-207	1 1/16	5/8	3/4	.....	14 5/8	1.7
Z-208	1 1/4	3/4	7/8	.....	16 3/8	2.6
Z-209	1 7/16	7/8	1	.....	17 7/8	3.7
Z-210	1 5/8	1	1 1/8	.....	19 1/2	5.3
Z-211	1 13/16	1 1/8	1 1/4	.....	21	7.3
Z-212	2	1 1/4	1 3/8	.....	21	7.3

♦ REGISTERED TRADE MARK

(Alloy Steel Wrenches, page 39)

1-52

DROP-FORGINGS AND

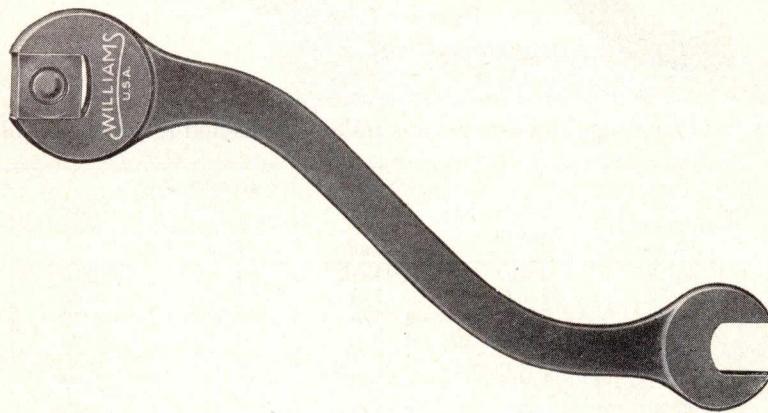
WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPERIOR" HEAVY "S" OR CAR WRENCHES
(Carbon Steel)

22 1/2° Angle, Double Head

Long Leverage



These Wrenches are milled, sizes stamped, hardened all over, shot-blasted — heads not bright.

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	Amer. Std. REGULAR Nuts; Size Bolts	Ex- treme Length, Approx.	Weight Each, Lbs.	No.
367A	5/8 & 13/16	.....	3/8 & 1/2	12	1.4	367A
367	11/16 & 7/8	3/8 & 1/2	9/16	12	1.4	367
370C	13/16 & 7/8	1/2	1/2 & 9/16	19	2.7	370C
370A	13/16 & 1	.....	1/2 & 5/8	19	2.6	370A
370	7/8 & 1 1/16	1/2 & 5/8	9/16	19	2.6	370
370B	1 & 1 1/8	.....	5/8 & 3/4	19	2.5	370B
*372A	1 1/16 & 1 1/4	5/8 & 3/4	.....	20	3.3	*372A
373	1 1/8 & 1 5/16	.....	3/4 & 7/8	20	3.1	373
376A	1 1/4 & 1 7/16	3/4 & 7/8	.....	21	4.2	376A
376	1 5/16 & 1 1/2	.....	7/8 & 1	21	4.	376
†378A	1 7/16 & 1 5/8	7/8 & 1	.....	22	4.9	†378A
379	1 1/2 & 1 11/16	.....	1 & 1 1/8	22	4.7	379
382A	1 5/8 & 1 13/16	1 & 1 1/8	.....	23	6.3	382A
382	1 11/16 & 1 7/8	.....	1 1/8 & 1 1/4	23	6.1	382
383B	1 7/8 & 2 1/4	.....	1 1/4 & 1 1/2	24	6.5	383B
385	1 13/16 & 2	1 1/8 & 1 1/4	.....	24	6.7	385
389	2 & 2 3/8	1 1/4 & 1 1/2	.....	25	9.6	389
389B	2 3/16 & 2 3/8	1 3/8 & 1 1/2	.....	25	9.4	389B

* No. 372A supersedes Old No. 373 previously listed for 5/8 & 3/4" U. S. Nuts.

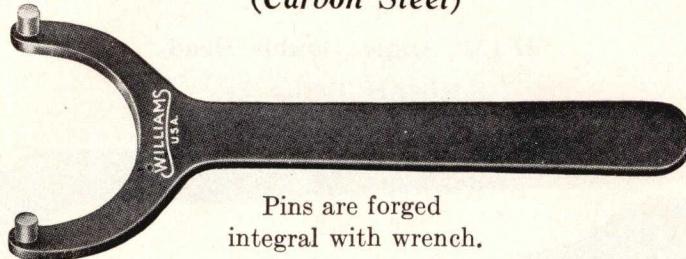
† No. 378A supersedes Old No. 379 previously listed for 7/8 & 1" U. S. Nuts.

♦ REGISTERED TRADE MARK

DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPERIOR" FACE SPANNERS
(Carbon Steel)

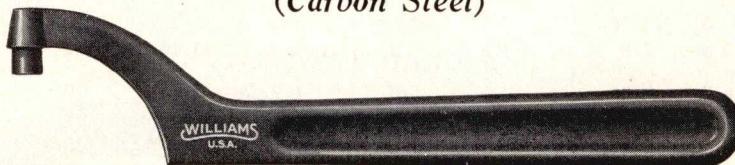


Pins are forged
integral with wrench.

These wrenches have surfaces smoothed, pins milled, hardened all over and black enameled.

No.	Pins			Span of Jaws in Clear	Length from C. of Pins	Thick- ness	Weight Each, Lbs.	No.
	Distance C to C	Diameter Milled	Length					
418	1	3/16	3/16	11/16	4 1/2	3/16	.13	418
420	1 1/4	7/32	7/32	7/8	5	3/16	.17	420
422	1 1/2	7/32	7/32	1 1/8	5 1/2	3/16	.20	422
424	1 3/4	7/32	7/32	1 3/8	6	7/32	.28	424
426	2	1/4	1/4	1 19/32	6 1/2	7/32	.30	426
428	2 1/4	1/4	1/4	1 27/32	7	7/32	.42	428
430	2 1/2	9/32	9/32	2 1/32	7 1/2	1/4	.52	430
432	2 3/4	9/32	9/32	2 9/32	8	1/4	.59	432
434	3	5/16	5/16	2 1/2	8 1/2	1/4	.70	434
436	3 1/4	5/16	5/16	2 3/4	9 1/8	1/4	.82	436
438	3 1/2	5/16	5/16	3	9 3/4	1/4	.89	438
440	3 3/4	3/8	3/8	3 3/16	10 3/8	1/4	1.	440
442	4	3/8	3/8	3 7/16	11	1/4	1.1	442

WILLIAMS' ♦ "SUPERIOR" PIN SPANNERS
(Carbon Steel)



Pins are forged integral with wrench. For conditions of finish, see above.

Number	For Circle; Diameter	Extreme Length, Approx.	Finished Diameter Pin	Weight Each, Lbs.	Number
452	1	4	3/16	.08	452
453	1 1/4	4 1/2	13/64	.11	453
454	1 1/2	5	7/32	.13	454
455	1 3/4	5 1/2	15/64	.17	455
456	2	6	1/4	.20	456
457	2 1/4	6 1/2	17/64	.23	457
458	2 1/2	7	9/32	.31	458
459	2 3/4	7 1/2	19/64	.33	459
460	3	8	5/16	.44	460
461	3 1/4	8 1/2	21/64	.50	461
462	3 1/2	9	11/32	.56	462
463	3 3/4	9 1/2	23/64	.66	463
464	4	10	3/8	.70	464
466	5	12	7/16	1.3	466
468	6	14	1/2	1.9	468

♦ REGISTERED TRADE MARK

1-52

WILLIAMS' ♦ "SUPERIOR" HOOK SPANNERS
(Carbon Steel)



For Taper Nose
 Lathe Spindles

Made especially to service Face Plate Draw Nuts used on taper-nose spindles for new design lathes. Very efficient, also, for general work.

Supplied with bearing pads and hook machined; hardened, black enameled (baked on).

No.	For Circle; Diameter	Extreme Length	Thickness, Hook End	Weight Each, Lbs.	No.
414	* 7 3/8	20	5/8	4.1	414
415	* 9 1/4	23 1/4	11/16	5.7	415
416	*12 1/2	30 3/4	3/4	8.7	416

WILLIAMS' FLAT HOOK SPANNERS
(Carbon Steel)

Not Machined



The diameter of circle which the unfinished forgings fit is given in second column of table, but wrenches will finish to sizes stated in third column.

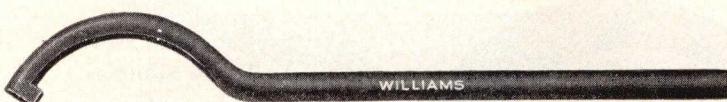
No.	Forgings for Circle; Diameter	Forgings will finish for Circles; Diameter	Extreme Length, Approx.	Thickness	Weight Each, Lbs.	No.
403	1 1/4	1 to 1 1/4	4 3/4	7/32	.13	403
404	1 1/2	1 3/8 to 1 5/8	6	1/4	.25	404
405	2	1 3/4 to 2	7 1/8	1/4	.38	405
406	2 1/4	2 1/8 to 2 3/8	8 7/16	1/4	.48	406
407	2 5/8	2 1/2 to 2 3/4	9 3/4	1/4	.64	407
408	3 1/8	2 7/8 to 3 1/4	11	5/16	.98	408
409	3 3/4	3 3/8 to 3 7/8	12	5/16	1.2	409
410	4 3/8	4 to 4 1/2	13	5/16	1.3	410
412	5 3/4	5 1/4 to 5 3/4	15	7/16	2.6	412

* Can be furnished to order for circle 1/8" larger.

♦ REGISTERED TRADE MARK

WILLIAMS' LIGHT HOOK SPANNERS
(Carbon Steel)

Not Machined



† Length of handle can be varied if desired.

No.	For Circle; Diameter	Extreme †Length, Approx.	Hook			Diameter Handle	Weight Each, Lbs.	No.
			Length	Width	Thickness			
491	1 3/16	6 1/2	1/16	3/8	7/32	3/8	.20	491
493	1 3/4	7 1/2	1/8	3/8	7/32	3/8	.22	493
494	2 1/8	8	1/8	3/8	7/32	3/8	.23	494
495	2 1/2	8 1/4	1/8	3/8	7/32	3/8	.23	495
496	2 3/4	8 1/2	1/8	3/8	7/32	3/8	.25	496
497	3	8 3/4	1/8	3/8	7/32	3/8	.25	497
498	3 1/2	9	1/8	3/8	7/32	3/8	.27	498

WILLIAMS' "SUPERIOR" ADJUSTABLE FACE SPANNERS
(Carbon Steel)

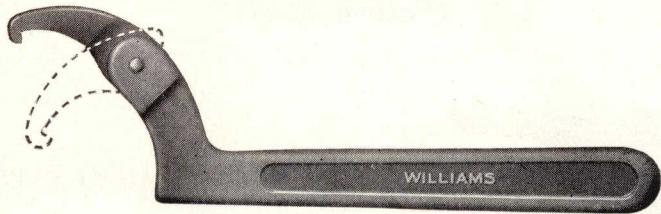


Drop-forged from a strong, tough grade of carefully selected steel, this is a desirable and dependable tool for service where Center to Center dimensions vary.

These Wrenches have pins milled, surfaces smooth, hardened, black enameled (baked on).

No.	Extreme Capacity	Extreme Length, Approx.	Diameter of Pins	Weight Each, Lbs.	No.
482	2	6 3/8	3/16	.33	482
483	3	8 1/4	1/4	.59	483
484	4	10 3/8	5/16	1.	484

**WILLIAMS' ♦ "SUPERIOR" ADJUSTABLE HOOK SPANNERS
(Carbon Steel)**



These Spanners offer an unusual combination of strength and ready adjustment; each tool provides for a wide range of sizes—see table. Drop-forged from a strong, tough grade of carefully selected steel, surfaces smoothed, black enameled (baked on); jaw hardened and tempered.

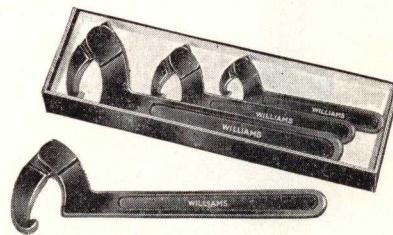
SET No. 401

In Cardboard Box

Weight, 3 lbs.

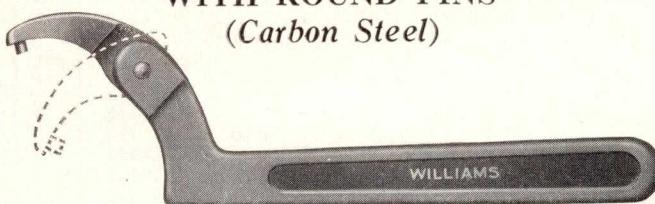
1 Each, Nos. 471, 472, 474 and 474A

Sold individually, or in Set No. 401 which is especially serviceable on spindle bearings of lathes, milling machines and grinding machines. Also, for adjusting collars and slotted rings used on many types of automatic machines.



No.	Capacity for Circles, Diameter	Extreme Length, Approx.	Thickness		Depth Hook	Weight Each, Lbs.	No.
			Handle	Hook			
471	3/4 to 2	6 3/8	1/4	11/32	1/8	.28	471
472	1 1/4 to 3	8 1/8	9/32	13/32	5/32	.52	472
474	2 to 4 3/4	11 3/8	5/16	15/32	3/16	.95	474
474A	4 1/2 to 6 1/4	12 1/8	5/16	15/32	1/4	1.1	474A

**WILLIAMS' ♦ "SUPERIOR" ADJUSTABLE HOOK SPANNERS
WITH ROUND PINS
(Carbon Steel)**



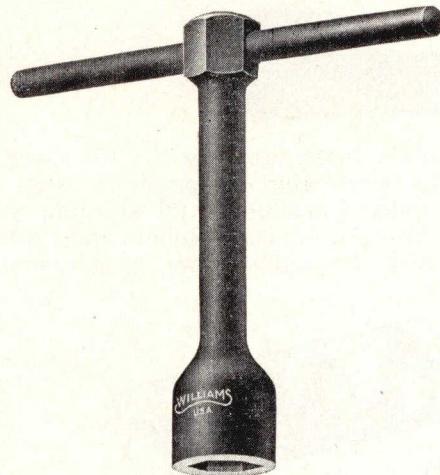
This adjustable type pin spanner is used for adjusting collars, lock nuts, rings, etc., used on various types of machine tool equipment. Drop-forged from a strong, tough grade of carefully selected steel, surfaces smoothed, black enameled (baked on); alloy steel jaw hardened and tempered.

No.	Capacity for Circles, Diameter	Extreme Length, Approx.	Thickness		Pin Size		Weight Each, Lbs.	No.
			Handle	Hook	Diam.	Length		
O-471	3/4 to 2	6 3/8	1/4	11/32	1/8	1/8	.27	O-471
O-471A	3/4 to 2	6 3/8	1/4	11/32	3/16	5/32	.27	O-471A
O-472	1 1/4 to 3	8 1/8	9/32	13/32	3/16	3/16	.5	O-472
O-472A	1 1/4 to 3	8 1/8	9/32	13/32	1/4	7/32	.5	O-472A
O-474	2 to 4 3/4	11 3/8	5/16	15/32	1/4	1/4	.99	O-474
O-474A	4 1/2 to 6 1/4	12 1/8	5/16	15/32	3/8	1/4	1.1	O-474A

♦ REGISTERED TRADE MARK

(Alloy Steel Adjustable Hook Spanners, page 52.)

WILLIAMS' ♦"SUPERIOR" SOCKET WRENCHES
(Carbon Steel)



STRAIGHT PATTERN

These wrenches are broached, surface smooth, sizes stamped, hardened and black enameled (baked on) — faces bright.

Whitworth Standard sizes, see page 214.

Special broaching to order in reasonable quantities.

(Continued on following page)

No.	HEXAGON OPENINGS					Diam. of Head	Extreme Length, Approx.	Weight Each, Lbs.	No.
	Nominal Opening Across Flats	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGULAR Nut; Size Bolt				
961A	5/16	1/8				1/2	4 1/4	.13	961A
962D	3/8		3/16			5/8	4 1/2	.22	962D
963A	13/32	3/16				11/16	4 7/8	.3	963A
963D	7/16		1/4	1/4	1/4	11/16	4 7/8	.3	963D
964A	1/2	1/4	5/16	5/16		3/4	5 1/4	.31	964A
965D	9/16		3/8	3/8	5/16	7/8	5 3/4	.45	965D
965A	19/32	5/16				7/8	5 3/4	.45	965A
966D	5/8		7/16	7/16	3/8	1	6 1/8	.63	966D
967A	11/16	3/8				1 1/8	6 1/2	.92	967A
967D	3/4		1/2	1/2	7/16	1 1/8	6 1/2	.92	967D
968A	25/32	7/16				1 1/4	7	1.1	968A
968D	13/16		9/16			1 1/4	7	1.1	968D
969A	7/8	1/2	5/8	9/16	9/16	1 3/8	7 3/8	1.3	969A
970S	15/16	9/16		5/8		1 1/2	7 7/8	1.6	970S
970D	1		3/4		5/8	1 1/2	7 7/8	1.6	970D
971A	1 1/16	5/8		3/4		1 5/8	8 1/4	1.9	971A
971D	1 1/8		7/8		3/4	1 5/8	8 1/4	1.9	971D
973A	1 1/4	3/4		7/8		1 7/8	9 1/8	2.9	973A
973B	1 5/16		1		7/8	1 7/8	9 1/8	2.9	973B
975A	1 7/16	7/8		1		2 1/8	10	4.2	975A
975D	1 1/2		1 1/8		1	2 1/8	10	4.2	975D
976A	1 5/8	1		1 1/8		2 3/8	10 3/8	5.3	976A
976B	1 11/16		1 1/4		1 1/8	2 3/8	10 3/8	5.3	976B
977A	1 13/16	1 1/8		1 1/4		2 5/8	10 7/8	7.2	977A
977B	1 7/8				1 1/4	2 5/8	10 7/8	6.7	977B
978A	2	1 1/4		1 3/8		2 7/8	11 3/8	6.8	978A
979A	2 3/16	1 3/8		1 1/2		3	11 7/8	8.7	979A
979B	2 1/4				1 1/2	3	11 7/8	8.7	979B
980A	2 3/8	1 1/2				3 5/16	12 1/2	11.	980A

WILLIAMS' ♦ "SUPERIOR" SOCKET WRENCHES
(Carbon Steel)

STRAIGHT PATTERN

(Continued from previous page)

Hexagon end of shank is designed for use in combination with another wrench or with Pin-Handle.

Wrenches of shorter or longer lengths than stated in table can be furnished to order in quantities.

Pin-Handles can be removed.



No.	SQUARE OPENINGS					Diam. of Head	Extreme Length, Approx.	Weight Each, Lbs.	No.
	Nominal Opening	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Cap Screw; Diam. Screw	For Set Screw; Size	Amer. Std. REGULAR Nut; Size Bolt				
961H	3/16	.....	.....	3/16	.....	1/2	4 1/4	.13	961H
961J	1/4	.....	.....	1/4	.....	1/2	4 1/4	.13	961J
962H	5/16	.....	.....	5/16	.....	5/8	4 1/2	.22	962H
963H	3/8	.....	1/4	3/8	.....	11/16	4 7/8	.3	963H
965H	7/16	.....	5/16	7/16	1/4	7/8	5 3/4	.45	965H
966H	1/2	1/4	3/8	1/2	.....	1	6 1/8	.63	966H
967H	9/16	.....	7/16	9/16	5/16	1 1/8	6 1/2	.92	967H
968H	5/8	.....	1/2	5/8	3/8	1 1/4	7	1.1	968H
968P	11/16	3/8	9/16	.....	.....	1 1/4	7	1.1	968P
969H	3/4	.....	5/8	3/4	7/16	1 3/8	7 3/8	1.3	969H
971H	7/8	1/2	3/4	7/8	9/16	1 5/8	8 1/4	1.9	971H
973H	1	.....	.....	1	5/8	1 7/8	9 1/8	2.9	973H
974H	1 1/8	.....	7/8	1 1/8	3/4	2	9 1/2	3.5	974H
976H	1 1/4	3/4	1	1 1/4	.....	2 3/8	10 3/8	5.3	976H
977X	1 7/16	7/8	.....	.....	.....	2 5/8	10 7/8	7.2	977X
977P	1 1/2	.....	1 1/4	1 1/2	1	2 5/8	10 7/8	7.2	977P

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "SUPERIOR" OFFSET SOCKET WRENCHES
(Carbon Steel)



These wrenches are broached, surface smooth, sizes stamped, hardened and black enameled — faces bright. Whitworth Standard sizes, see page 214.

(Continued on following page)

No.	HEXAGON OPENINGS					Diam. of Head	Extreme Length, Approx.	Handle Offset in Clear from Face of Wrench	Weight Each, Lbs.	No.
	Nominal Opening Across Flats	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGULAR Nut; Size Bolt					
261A	5/16	1/8	.....	.....	.....	1/2	3 3/8	13/16	.08	261A
262D	3/8	.....	3/16	.....	.....	5/8	3 7/8	1	.17	262D
263A	13/32	3/16	.....	.....	.....	11/16	4 5/16	1 1/16	.19	263A
263D	7/16	.....	1/4	1/4	1/4	11/16	4 5/16	1 1/16	.20	263D
264A	1/2	1/4	5/16	5/16	.....	3/4	5 1/8	1 1/4	.22	264A
265D	9/16	.....	3/8	3/8	5/16	7/8	5 7/8	1 7/16	.36	265D
265A	19/32	5/16	.....	.....	.....	7/8	5 7/8	1 7/16	.36	265A
266D	5/8	.....	7/16	7/16	3/8	1	6 1/4	1 9/16	.50	266D
267A	11/16	3/8	.....	.....	.....	1 1/8	6 3/4	1 5/8	.67	267A
267D	3/4	.....	1/2	1/2	7/16	1 1/8	6 3/4	1 5/8	.67	267D
268A	25/32	7/16	.....	.....	.....	1 1/4	7 1/2	1 13/16	.92	268A
268D	13/16	.....	9/16	.....	1/2	1 1/4	7 1/2	1 13/16	.94	268D
269A	7/8	1/2	5/8	9/16	9/16	1 3/8	8 3/8	2	1.1	269A
270S	15/16	9/16	.....	5/8	.....	1 1/2	9 1/8	2 3/16	1.4	270S
270D	1	.....	3/4	.....	5/8	1 1/2	9 1/8	2 3/16	1.4	270D
271A	1 1/16	5/8	.....	3/4	.....	1 5/8	10	2 3/8	1.8	271A
271D	1 1/8	.....	7/8	.....	3/4	1 5/8	10	2 3/8	1.8	271D
273A	1 1/4	3/4	.....	7/8	.....	1 7/8	11 5/8	2 3/4	2.7	273A
273B	1 5/16	.....	1	.....	7/8	1 7/8	11 5/8	2 3/4	2.7	273B
275A	1 7/16	7/8	.....	1	.....	2 1/8	13 1/4	3 1/8	4.1	275A
275D	1 1/2	.....	1 1/8	.....	1	2 1/8	13 1/4	3 1/8	4.1	275D
276A	1 5/8	1	.....	1 1/8	.....	2 3/8	14 7/8	3 1/2	5.1	276A
276B	1 11/16	.....	1 1/4	.....	1 1/8	2 3/8	14 7/8	3 1/2	5.1	276B
277A	1 13/16	1 1/8	.....	1 1/4	.....	2 5/8	16 1/2	3 7/8	6.6	277A
277B	1 7/8	.....	.....	1 1/4	.....	2 5/8	16 1/2	3 7/8	6.1	277B
278A	2	1 1/4	.....	1 3/8	.....	2 7/8	18 1/4	4 3/8	8.	278A
279A	2 3/16	1 3/8	.....	1 1/2	.....	3	20	4 7/8	10.	279A
279B	2 1/4	.....	.....	.....	1 1/2	3	20	4 7/8	10.	279B
280A	2 3/8	1 1/2	.....	.....	.....	3 5/16	21 3/4	5 3/8	12.5	280A

♦ REGISTERED TRADE MARK

1-62

WILLIAMS' ♦ "SUPERIOR" OFFSET SOCKET WRENCHES
(Carbon Steel)



(Continued from previous page)

Special broaching to order in reasonable quantities.

These Offset Socket Wrenches, of shorter or longer lengths than stated in table, can be furnished to order in quantities.

No.	SQUARE OPENINGS					Diam. of Head	Extreme Length, Approx.	Handle Offset in Clear from Face of Wrench	Weight Each, Lbs.	No.
	Nominal Opening	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Cap Screw; Diam. Screw	For Set Screw; Size	Amer. Std. REGULAR Nut; Size Bolt					
261J	1/4			1/4		1/2	3 3/8	13/16	.08	261J
262H	5/16			5/16		5/8	3 7/8	1	.17	262H
263H	3/8		1/4	3/8		11/16	4 5/16	1 1/16	.20	263H
265H	7/16		5/16	7/16	1/4	7/8	5 7/8	1 7/16	.36	265H
266H	1/2	1/4	3/8	1/2		1	6 1/4	1 9/16	.52	266H
267H	9/16		7/16	9/16	5/16	1 1/8	6 3/4	1 5/8	.70	267H
268H	5/8		1/2	5/8	3/8	1 1/4	7 1/2	1 13/16	.95	268H
268P	11/16	3/8	9/16			1 1/4	7 1/2	1 13/16	.92	268P
269H	3/4		5/8	3/4	7/16	1 3/8	8 3/8	2	1.	269H
271H	7/8	1/2	3/4	7/8	9/16	1 5/8	10	2 3/8	1.9	271H
273H	1			1	5/8	1 7/8	11 5/8	2 3/4	2.7	273H
274H	1 1/8		7/8	1 1/8	3/4	2	12 3/8	2 7/8	3.5	274H
276H	1 1/4	3/4	1	1 1/4		2 3/8	14 7/8	3 1/2	5.7	276H

♦ REGISTERED TRADE MARK

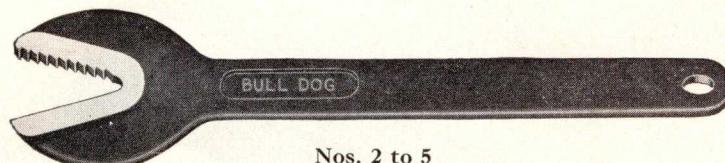
DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' "BULL DOG" WRENCHES

(Carbon Steel)



Nos. 2 to 5



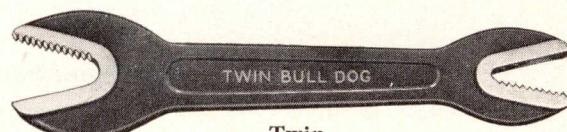
No. 1



No. 1 3/4



No. 1 1/2



Twin

"ALWAYS READY" WRENCHES



Designed for all-around service, these wrenches will grip round, square, hexagon or any shape that will fit between their tough jaws.

Drop-forged from a specially fine grade of steel and carefully tempered in oil, these wrenches are practically indestructible.

The handles of "Bull Dog" Nos. 2 and 2-1/2 are concave.

"BULL DOG" WRENCHES

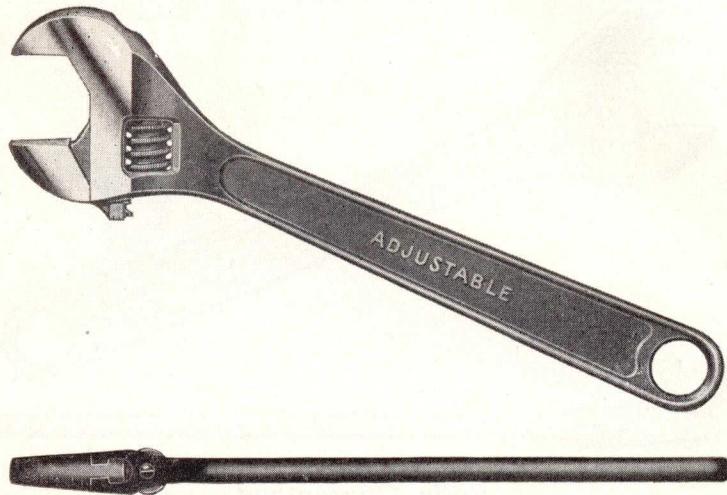
No.	Capacity		Extreme Length	Weight Each, Lbs.	No.
	Pipe	Rounds			
1	1/8 to 3/8	1/4 to 3/4	5 1/2	.25	1
1 1/2	1/8 to 1/2	3/8 to 7/8	5 1/2	.29	1 1/2
1 3/4	1/8 to 3/4	3/8 to 1	7	.56	1 3/4
2	1/4 to 3/4	1/2 to 1	9	.86	2
2 1/2	3/8 to 1	5/8 to 1 1/4	12 1/2	1.4	2 1/2
3	1/2 to 1 1/4	3/4 to 1 1/2	16	3.1	3
3 1/2	1/2 to 1 1/2	3/4 to 1 3/4	18 3/4	4.3	3 1/2
4	3/4 to 2	1 to 2 1/4	22	7.9	4
4 1/2	1 to 2 1/2	1 1/4 to 2 3/4	24	10.1	4 1/2
5	2 to 3	2 1/4 to 3 1/2	27	13.8	5
Twin	1/8 to 3/4	5/16 to 1	10	1.1	Twin

"ALWAYS READY" WRENCHES

1	1/8 to 3/8	1/4 to 3/4	5	.37	1
2	1/8 to 1	1/4 to 1 1/4	7	.75	2
2 1/2	1/8 to 1 1/2	1/4 to 1 3/4	9 1/2	1.7	2 1/2
3	1/2 to 1 1/2	3/4 to 2	11 1/2	2.7	3

1 52

WILLIAMS' ADJUSTABLE WRENCHES
 (Carbon Steel)
 PATENTED



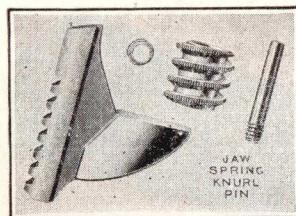
Fully Guaranteed

Williams' Carbon Adjustable Wrenches with thin, tapered jaws, are thinner and lighter than conventional carbon steel adjustable wrenches of similar capacity and possess unusual strength and toughness due to improved design and materials. They are drop-forged from the finest selected steel and accurately heat-treated.

The exclusive design of the square shoulders on the shank portion of the sliding jaw provide maximum and positive bearing against working stress. They eliminate entirely the wedging and spreading action, inevitable in wrenches having a cylindrical bearing at this point. The shoulders also permit a thicker "web" on the jaw, for added strength, without increasing the thickness of the wrench head. The net result is a sliding jaw that is unbreakable in wrench service.

Drop-forged from specially strong, tough steel and accurately heat-treated in electric furnaces for uniform, dependable strength. Finish—shot-blasted, faces of heads polished bright. Packed, individually, in attractive cardboard box.

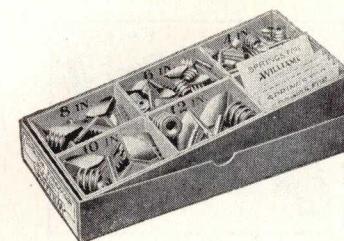
REPLACEMENT PARTS ASSORTMENT



Weight, 2.5 Lbs.

Packed in compartment cardboard box containing 88 of the following parts:—

Size	Jaws	Knurls	Pins	Springs
4"	4	4	4	4
6"	6	6	6	6
8"	6	6	6	6
10"	4	4	4	4
12"	2	2	2	2



Size, Inch	Capacity	Thickness Head		Weight Each, Lbs.	Extra Parts				Size, Inch
		Tip of Jaws	Extreme		Jaw	Knurl	Pin	Spring	
4	1/2	9/64	5/16	.11	.....	.....	.....	.....	4
6	3/4	7/32	3/8	.28	.....	.....	.....	.....	6
8	15/16	17/64	1/2	.52	.....	.....	.....	.....	8
10	1- 1/8	23/64	19/32	.88	.....	.....	.....	.....	10
12	1- 5/16	15/32	23/32	1.5	.....	.....	.....	.....	12
15	1- 3/4	19/32	31/32	3.4	.....	.....	.....	.....	15
18	2- 1/16	23/32	1- 3/16	5.6	.....	.....	.....	.....	18

DROP-FORGINGS AND

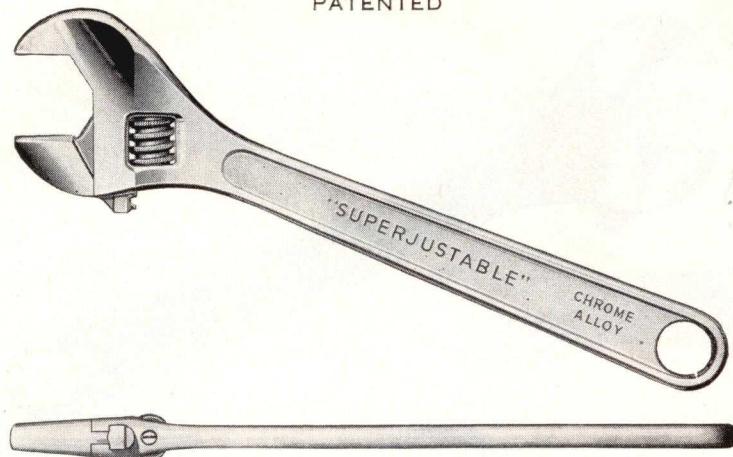
WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' "SUPERJUSTABLE" WRENCHES

Selected Alloy Steel

PATENTED



Fully Guaranteed

Williams' "Superjustable" Wrenches with thin, tapered jaws, are drop-forged from the finest grade of Selected Alloy Steel obtainable for the purpose. "Superjustables" are thinner and lighter, yet stronger and tougher than conventional carbon steel adjustable wrenches of similar capacity. They are second to no other alloy steel adjustable wrenches in appearance, strength and durability.

The exclusive design of the square shoulders on the shank portion of the sliding jaw provide maximum and positive bearing against working stress. They eliminate entirely the wedging and spreading action, inevitable in wrenches having a cylindrical bearing at this point. The shoulders also permit a thicker "web" on the jaw, for added strength, without increasing the thickness of the wrench head. The net result is a sliding jaw with maximum resistance to breakage.

All parts are carefully machined to extremely close limits, assuring the accurate fit essential in wrenches of this class. Heat-treatment in recording electric furnaces of the latest type insures uniformity of product and tough, dependable strength.

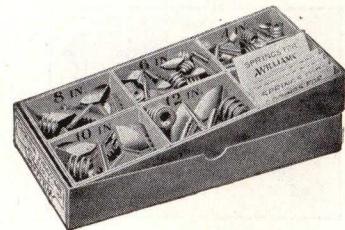
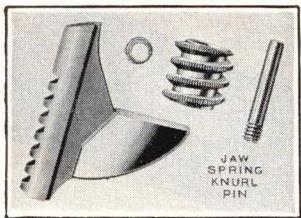
Attractively finished in chrome-plate over nickel, with highly polished face; the handle is in "satin" finish. Individually packed.

REPLACEMENT PARTS ASSORTMENT

Weight, 2.5 Lbs.

Packed in compartment cardboard box containing 88 of the following parts:

Size	Jaws	Knurls	Pins	Springs
4"	4	4	4	4
6"	6	6	6	6
8"	6	6	6	6
10"	4	4	4	4
12"	2	2	2	2



Size, Inch	Capacity	Thickness Head		Weight Each, Lbs.	Extra Parts				Size, Inch
		Tip of Jaws	Extreme		Jaw	Knurl	Pin	Spring	
4	1/2	9/64	5/16	.11	.....	.....	.....	.....	4
6	3/4	7/32	3/8	.27	.....	.....	.....	.....	6
8	15/16	17/64	1/2	.52	.....	.....	.....	.....	8
10	1- 1/8	23/64	19/32	.90	.....	.....	.....	.....	10
12	1- 5/16	15/32	23/32	1.6	.....	.....	.....	.....	12
15	1- 3/4	19/32	31/32	3.6	15
18	2- 1/16	23/32	1- 3/16	6.	18
24	2- 7/16	7/8	1- 3/8	9.1	24

◆ REGISTERED TRADE MARK

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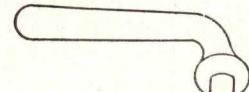
WILLIAMS' "SUPER RENCHES"
Selected Alloy Steel

ENGINEERS' PATTERN — 15° Angle, Single Head



These "Superrenches" are drop-forged from Selected Alloy Steel and heat-treated.
Finish—Chrome-plate over nickel, faces bright.

Handle can be bent above head at angles of 45° to 90° from opening, at an additional charge; see illustration at right.

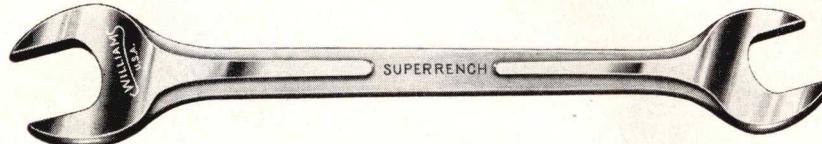


No.	Nominal Opening	For Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Amer. Std. Hex Head Cap Screw; Diam. Screw	For Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	For Amer. Std. REGULAR Nut; Size Bolt	Ex-treme Length	Thick-ness Head	Weight Each, Lbs.
1000	5/16	1/8	1/8			3 5/8	7/32	.07
1700	3/8		3/16			4 1/8	1/4	.09
1000A	13/32	3/16				4 1/8	1/4	.09
1701	7/16		1/4	1/4	1/4	4 3/4	9/32	.13
1001	1/2	1/4	5/16	5/16		4 3/4	9/32	.13
1702	9/16		3/8	3/8	5/16	5 5/8	5/16	.22
1002	19/32	5/16				5 5/8	5/16	.22
1703	5/8		7/16	7/16	3/8	6 1/2	11/32	.33
1003	11/16	3/8				6 1/2	11/32	.33
1704	3/4		1/2	1/2	7/16	7 3/8	3/8	.48
1004	25/32	7/16				7 3/8	3/8	.48
1705	13/16		9/16		1/2	8 3/8	7/16	.65
1005	7/8	1/2	5/8	9/16	9/16	8 3/8	7/16	.65
1006	15/16	9/16		5/8		9 1/2	1/2	.92
1706	1		3/4	11/16	5/8	9 1/2	1/2	.92
1007	1 1/16	5/8		3/4		10 3/4	9/16	1.5
1707	1 1/8		7/8		3/4	10 3/4	9/16	1.5
1008	1 1/4	3/4		7/8		12 1/4	21/32	2.2
1008A	1 5/16		1		7/8	12 1/4	21/32	2.2
1009	1 7/16	7/8		1		13 7/8	23/32	2.8
1709	1 1/2		1 1/8		1	13 7/8	23/32	2.8
1010	1 5/8	1		1 1/8		15 1/2	25/32	3.9
1010A	1 11/16		1 1/4		1 1/8	15 1/2	25/32	3.9
1011	1 13/16	1 1/8		1 1/4		17 1/8	7/8	4.8
1011A	1 7/8				1 1/4	17 1/8	7/8	4.8
1012	2	1 1/4		1 3/8		18 7/8	15/16	6.2
1012A	2 1/16				1 3/8	18 7/8	15/16	6.2
1013	2 3/16	1 3/8		1 1/2		20 3/4	1	8.
1013A	2 1/4				1 1/2	20 3/4	1	8.
1014	2 3/8	1 1/2				22 3/4	1 1/16	10.
1014A	2 7/16				1 5/8	22 3/4	1 1/16	10.

♦ REGISTERED TRADE MARK

WILLIAMS' "SUPERRENCHES"
Selected Alloy Steel

NEW STREAMLINED DESIGN
15° Angle, Double Head Open-End



Williams' NEW Streamlined "Superrenches" with double head, open-ends are available in a full range of 15° angle opening combinations.

A redistribution of weight has created exceptional balance so important to the mechanic. Slimmer heads, longer and narrower handles make these wrenches more serviceable where clearance is limited.

The selected alloy steel from which these "Superrenches" are drop-forged assures ample strength for the severest service. Finish is chrome plate over nickel with faces polished bright.

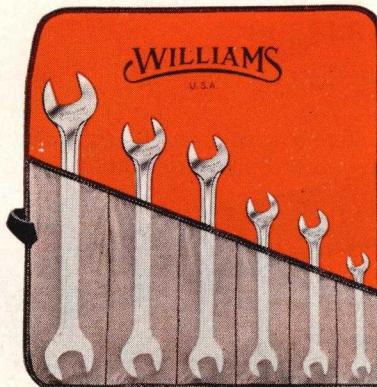
No.	Nominal Openings	For Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	For Amer. Std. Hex Head Cap Screws; Diam. Screws	For Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	For Amer. Std. REGULAR Nuts; Size Bolts	Ex-treme Length	Thickness Heads	Weight Each, Lbs.	No.
A1020	1/4 & 5/16	1/8	1/8	.....	.....	3 13/16	5/32	.03	A1020
A1720	5/16 & 11/32	1/8	1/8	.....	.....	4 1/4	3/16	.05	A1720
A1721	5/16 & 3/8	1/8	1/8 & 3/16	.....	.....	4 1/4	3/16	.05	A1721
A1021	5/16 & 13/32	1/8 & 3/16	1/8	.....	.....	4 1/2	13/64	.06	A1021
A1723	3/8 & 7/16	.....	3/16 & 1/4	1/4	1/4	4 11/16	13/64	.07	A1723
A1023	13/32 & 1/2	3/16 & 1/4	5/16	5/16	.....	4 7/8	7/32	.08	A1023
A1723A	3/8 & 1/2	1/4	13/16 & 5/16	5/16	.....	4 7/8	7/32	.08	A1723A
A1725	7/16 & 1/2	1/4	1/4 & 5/16	1/4	1/4	5 1/8	7/32	.10	A1725
A1725A	7/16 & 9/16	1/4 & 3/8	1/4 & 3/8	1/4 & 5/16	1/4 & 5/16	5 5/8	15/64	.12	A1725A
A1725B	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	6 1/4	1/4	.15	A1725B
A1025	1/2 & 19/32	1/4 & 5/16	5/16	5/16	.....	6 1/4	1/4	.16	A1025
A1727	9/16 & 5/8	.....	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6 7/8	17/64	.20	A1727
A1027C	9/16 & 11/16	3/8	3/8	3/8	5/16	7 1/8	9/32	.23	A1027C
A1027	19/32 & 11/16	5/16 & 3/8	3/8	3/8	5/16	7 1/2	9/32	.26	A1027
A1027B	5/8 & 11/16	3/8	7/16	7/16	3/8	7 1/2	9/32	.26	A1027B
A1028	19/32 & 25/32	5/16 & 7/16	7/16	7/16	3/8	8 1/4	19/64	.32	A1028
A1028S	5/8 & 25/32	7/16	7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	8 1/4	19/64	.32	A1028S
A1729	5/8 & 3/4	.....	7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	8 1/4	19/64	.32	A1729
A1029B	11/16 & 3/4	3/8	1/2	1/2	7/16	9	5/16	.38	A1029B
A1029	11/16 & 25/32	3/8 & 7/16	.....	.....	.....	9	5/16	.38	A1029
A1029C	11/16 & 13/16	3/8	9/16	.....	.....	9	5/16	.37	A1029C
A1030	11/16 & 7/8	3/8 & 1/2	5/8	9/16	9/16	9 3/8	21/64	.45	A1030
A1731	3/4 & 13/16	1/2	1/2 & 9/16	1/2	7/16 & 1/2	9 3/4	11/32	.54	A1731
A1731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	9 3/4	11/32	.54	A1731A
A1031B	25/32 & 13/16	7/16	9/16	.....	1/2	9 3/4	11/32	.54	A1031B
A1031	25/32 & 7/8	7/16 & 1/2	5/8	9/16	9/16	9 3/4	11/32	.53	A1031
A1731B	13/16 & 7/8	1/2	9/16 & 5/8	9/16	1/2 & 9/16	9 3/4	11/32	.53	A1731B
A1032B	13/16 & 15/16	9/16	9/16	5/8	1/2	10 1/2	3/8	.71	A1032B
A1033A	7/8 & 15/16	1/2 & 9/16	5/8	9/16 & 5/8	9/16	10 1/2	3/8	.69	A1033A
A1733	7/8 & 1	1/2	5/8 & 3/4	9/16	9/16 & 5/8	11 3/8	13/32	.92	A1733
A1033C	15/16 & 1	9/16	3/4	5/8	5/8	11 3/8	13/32	.91	A1033C
A1034	7/8 & 1 1/16	1/2 & 5/8	5/8	9/16 & 3/4	9/16	11 3/8	13/32	.90	A1034
A1034A	15/16 & 1 1/16	9/16 & 5/8	.....	5/8 & 3/4	.....	11 3/8	13/32	.90	A1034A
A1035	31/32 & 1 1/16	9/16 & 5/8	.....	3/4	.....	11 3/8	13/32	.92	A1035
A1735	1 & 1 1/8	.....	3/4 & 7/8	.....	5/8 & 3/4	12 1/4	7/16	1.1	A1735
A1036B	1 1/16 & 1 1/8	5/8	7/8	3/4	3/4	12 1/4	7/16	1.2	A1036B
A1037	1 1/16 & 1 1/4	5/8 & 3/4	.....	3/4 & 7/8	.....	13 1/4	15/32	1.4	A1037
A1737	1 1/8 & 1 1/4	3/4	7/8	7/8	3/4	13 1/4	15/32	1.4	A1737
A1037A	1 1/8 & 1 5/16	.....	7/8 & 1	.....	3/4 & 7/8	13 1/4	15/32	1.4	A1037A
A1039B	1 1/4 & 1 5/16	3/4	1	7/8	7/8	14 3/8	1/2	1.9	A1039B
A1039	1 1/4 & 1 7/16	3/4 & 7/8	.....	7/8 & 1	.....	14 3/8	1/2	1.8	A1039
A1039A	1 5/16 & 1 1/2	1	1 & 1/8	.....	7/8 & 1	15 1/2	17/32	2.3	A1039A
A1039C	1 3/8 & 1 7/16	7/8	.....	1	.....	15 1/2	17/32	2.3	A1039C
A1040	1 1/4 & 1 5/8	3/4 & 1	.....	7/8 & 1 1/8	.....	16 1/8	35/64	2.5	A1040
A1041	1 7/16 & 1 5/8	7/8 & 1	.....	1 & 1/8	.....	16 5/8	9/16	2.7	A1041
A1041B	1 1/2 & 1 5/8	1	1 1/8	1	1	16 5/8	9/16	2.7	A1041B

For Whitworth and Metric Sizes, see page 215.

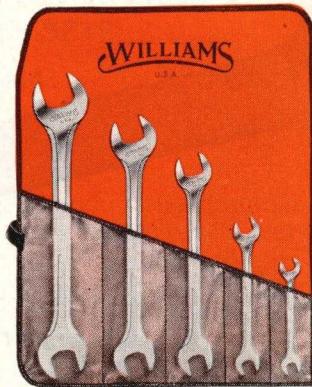
1-52

◆ REGISTERED TRADE MARK

WILLIAMS' ♦ "SUPERRENCH" SETS
Selected Alloy Steel



SET No. A1025A



SET No. A1005S

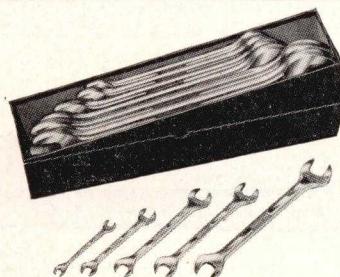
No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	Amer. Std. Hex Head Cap Screws; Diam. Screws	Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	Amer. Std. REGULAR Nuts; Size Bolts	No.
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SET No. A1025A
In Leatherette Roll — In Cardboard Box
Weight, 2.8 Lbs.

A1723	3/8 & 7/16	3/16 & 1/4	5/16	1/4	A1723
A1025	1/2 & 19/32	1/4 & 5/16	.....	.....	.....	A1025
A1727	9/16 & 5/8	.....	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	A1727
A1029	11/16 & 25/32	3/8 & 7/16	.....	.....	.....	A1029
A1731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	A1731A
A1033C	15/16 & 1	9/16	3/4	5/8	5/8	A1033C

SET No. A1005S
In Leatherette Roll — In Cardboard Box
Weight, 3.9 Lbs.

A1725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	A1725
A1727	9/16 & 5/8	.....	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	A1727
A1731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	A1731A
A1033C	15/16 & 1	9/16	3/4	5/8	5/8	A1033C
A1037	1 1/16 & 1 1/4	5/8 & 3/4	.....	3/4 & 7/8	.....	A1037



SET No. A1712A

Complete, In Cardboard Box
11 Wrenches, 22 Different Openings

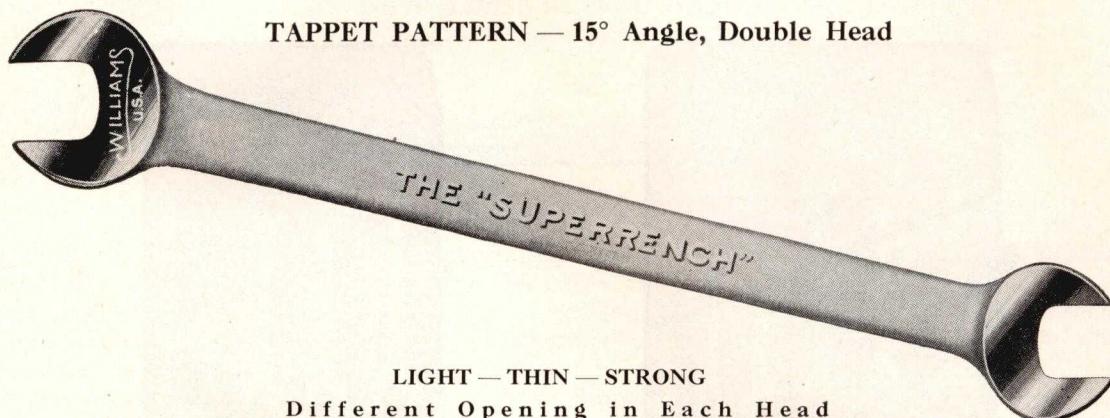
Weight, 9.5 Lbs.

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	Amer. Std. Hex Head Cap Screws; Diam. Screws	Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	Amer. Std. REGULAR Nuts; Size Bolts	No.
A1020	1/4 & 5/16	1/8	1/8	.....	.....	A1020
A1723	3/8 & 7/16	.....	3/16 & 1/4	1/4	1/4	A1723
A1025	1/2 & 19/32	1/4 & 5/16	5/16	5/16	5/16	A1025
A1727	9/16 & 5/8	.....	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	A1727
A1029	11/16 & 25/32	3/8 & 7/16	.....	.....	.....	A1029
A1731	3/4 & 13/16	.....	1/2 & 9/16	1/2	7/16 & 1/2	A1731
A1033A	7/8 & 15/16	1/2 & 9/16	5/8	9/16 & 5/8	9/16	A1033A
A1735	1 & 1 1/8	.....	3/4 & 7/8	5/8 & 3/4	5/8 & 3/4	A1735
A1037	1 1/16 & 1 1/4	5/8 & 3/4	.....	3/4 & 7/8	.....	A1037
A1039A	1 5/16 & 1 1/2	.....	1 & 1 1/8	.....	7/8 & 1	A1039A
A1039C	1 3/8 & 1 7/16	7/8	.....	1	.....	A1039C

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "SUPERRENCHES"
Selected Alloy Steel

TAPPET PATTERN — 15° Angle, Double Head



LIGHT — THIN — STRONG
Different Opening in Each Head

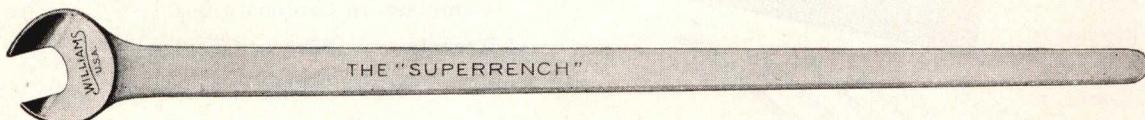
These light, thin Wrenches are specially designed for tappet adjustment; their length is ample to prevent burning the hands when the motor is hot.

The 15° angle of opening is unequalled in efficiency. It makes the same size opening in both heads of the wrench unnecessary. Consequently each "Superrench" serves two sizes of tappets.

Drop-forged from special Selected Alloy Steel, heat-treated, chrome-finished, heads buffed bright.

No.	Nominal Openings Tappet Sizes	For Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	For Amer. Std. Hex Head Cap Screws; Diam. Screws	For Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	For Amer. Std. REGULAR Nuts; Size Bolts	Ex-treme Length	Thick-ness Heads	Weight Each, Lbs.
1090A	3/8 & 7/16	.....	3/16 & 1/4	1/4	1/4	8	5/32	.19
1090	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	8	5/32	.19
1090G	7/16 & 17/32	.....	1/4	1/4	1/4	8	5/32	.19
1090D	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	8	5/32	.19
1092	9/16 & 5/8	.....	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	8	3/16	.22
1092F	5/8 & 11/16	3/8	7/16	7/16	3/8	8	3/16	.22
1094G	3/4 & 13/16	.....	1/2 & 9/16	1/2	7/16 & 1/2	9	7/32	.34
1094	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	9	7/32	.34
1096	15/16 & 1	9/16	3/4	5/8	5/8	9	7/32	.41

EXTRA LONG, THIN TAPPET PATTERN — 15° ANGLE



All auto mechanics will want these extra long (15 inch) Tappet Wrenches for convenient reach over hot manifolds. Slender and light for easy adjustment, with narrow jaws for close places. The range of openings—3/8 to 5/8"—provides comprehensive service for practically every make of car, including late models. All heads 3/16" thick.

Sold individually and in sets.

Drop-forged from special Selected Alloy Steel, and heat-treated for maximum strength. Cadmium-plated.

No.	Nominal Opening	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGULAR Nut	Weight Each, Lbs.	No.
A100C	3/8	3/16	.....	.....	.32	A100C
A100	7/16	1/4	1/4	1/4	.32	A100
A100A	1/2	5/16	5/16	.....	.32	A100A
A100B	9/16	3/8	3/8	5/16	.32	A100B
A101	5/8	7/16	7/16	3/8	.36	A101

♦ REGISTERED TRADE MARK

1-52

WILLIAMS' TAPPET + "SUPERRENCHES"

Selected Alloy Steel

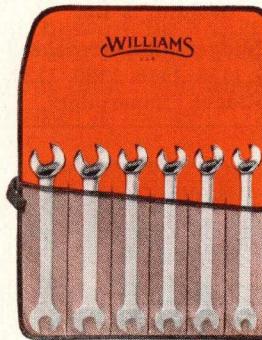
"SUPERRENCH" TAPPET SETS

15° Angle, Double Head

These light, thin Wrenches are specially designed for tappet adjustment; their length is ample to prevent burning the hands when the motor is hot.

The 15° angle of opening is unequalled in efficiency. It makes the same size opening in both heads of the wrench unnecessary. Consequently each "Superrench" serves two sizes of tappets.

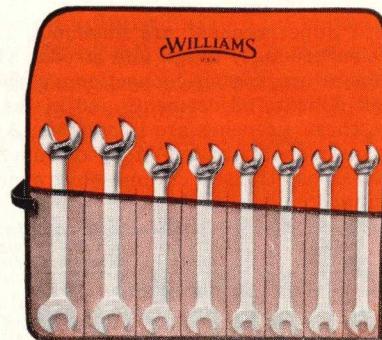
Drop-forged from special Selected Alloy Steel, heat-treated, chrome-finished, heads buffed bright.



SET No. 1032

In Leatherette Roll
In Cardboard Box
Weight, 1.3 Lbs.

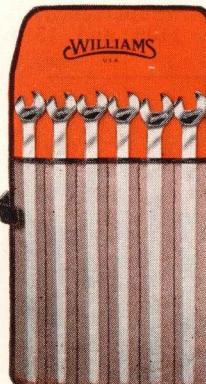
Six "Superrenches"; 2 each of Nos. 1090, 1090D and 1092F, described on page 32, covering every tappet size from 7/16 in. to 11/16 in. Cares for 80% of all passenger cars, buses and trucks.



SET No. 1042

In Leatherette Roll
In Cardboard Box
Weight, 1.9 Lbs.

Eight "Superrenches"; 2 each of Nos. 1090, 1090D, 1092F and 1094, described on page 32 provide comprehensive service for tappet adjustment. Cover practically all passenger cars, buses and trucks. An ideal set for the automobile mechanic.



Set No. 106

Set No. 106
In Leatherette Roll
In Cardboard Box
Weight, 2 Lbs.

6 wrenches; 2 each of Nos. A100A, A100B and A101, described on page 34.

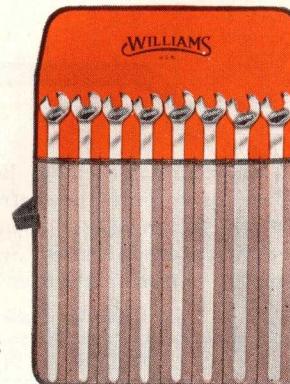
"SUPERRENCH" TAPPET SETS

15° Angle, Single Head

Set No. 108

In Leatherette Roll
In Cardboard Box
Weight, 2.7 Lbs.

8 wrenches; 2 each of Nos. A100, A100A, A100B and A101, described on page 34.



Set No. 108

See Page 34 for Individual Wrench Opening and Bolt Size Tabulation

DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' MIDGET + "SUPERRENCHES"

Selected Alloy Steel

OPEN END PATTERN



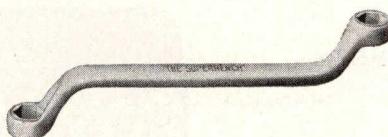
Midget "Superrenches" are unusually thin and slim, but surprisingly tough and strong. On magneto's, generators, wiring-connections, carburetors, radios, all delicate adjustments and in the closest quarters, these wrenches are invaluable. Available in the two styles illustrated—forged from Selected Alloy Steel, heat-treated, chrome-plate over nickel, faces bright.

No.	Nominal Openings	Extreme Length	Thickness Heads	Weight Lbs.	No.
15° ANGLE OPENING					
1106	13/64 & 7/32	3	3/32	.01	1106
1107	15/64 & 1/4	3	3/32	.01	1107
1108	9/32 & 11/32	3-1/2	1/8	.03	1108
1108A	1/4 & 5/16	3-1/2	1/8	.03	1108A
1109	5/16 & 3/8	3-1/2	1/8	.03	1109

15-75° ANGLE OPENING

1112	3/16 & 3/16	3	3/32	.01	1112
1113	13/64 & 13/64				1113
1114	7/32 & 7/32				1114
1115	15/64 & 15/64				1115
1116	1/4 & 1/4				1116
1118	9/32 & 9/32				1118
1120	5/16 & 5/16				1120
1122	11/32 & 11/32	3-3/4	1/8	.02	1122
1124	3/8 & 3/8				1124
1128	7/16 & 7/16				1128
1132	1/2 & 1/2				1132

6-POINT BOX MIDGET PATTERN

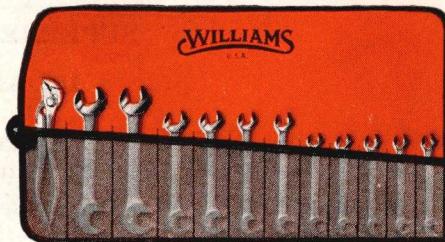


Midget Double Offset Box "Superrenches" are ideal for carburetor, electrical and ignition work. Offset design clears small obstructions where working space is limited. Selected Alloy Steel, heat-treated, chrome-plate over nickel, heads bright.

Fully Guaranteed

No.	Nominal Openings	Extreme Length	Weight Lbs.	No.
1150	13/64 & 3/16	2 7/8	.02	1150
1151	15/64 & 7/32	3 1/8	.03	1151
1152	9/32 & 1/4	3 3/8	.04	1152
1153	11/32 & 5/16	3 3/4	.06	1153

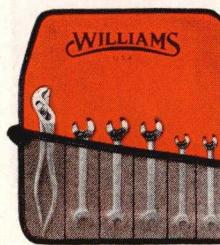
◆ REGISTERED TRADE MARK



SET No. 1141P

In Leatherette Roll
In Cardboard Box
Weight, .5 Lb.

Contains 11 Midget "Superrenches" Nos. 1112, 1113, 1114, 1115, 1116, 1118, 1120, 1122, 1124, 1128, 1132 and 1519 Midget "Superplier".



SET No. 1149P

With 1519 "Superplier"
In Leatherette Roll
In Cardboard Box
Weight, .25 Lb.

SET No. 1149
Without 1519 "Superplier"
In Leatherette Roll
In Cardboard Box
Weight, .13 Lb.

Handy assortment of 5 Midget "Superrenches" Nos. 1106, 1107, 1108, 1108A, 1109 and 1519 "Superplier".



SET No. 1154S

In Leatherette Roll
In Cardboard Box
Weight, .19 Lb.

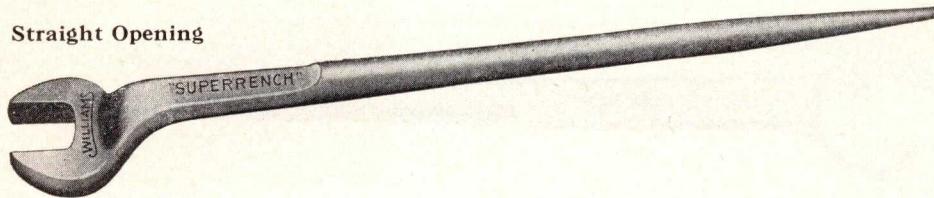
Contains 4 Midget Box "Superrenches" Nos. 1150, 1151, 1152 and 1153.

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WILLIAMS' "SUPER RENCHES"
Selected Alloy Steel

STRUCTURAL PATTERN

Straight Opening



These wrenches have been made especially to meet the needs of structural workers. The slim design provides ample strength and leverage without unnecessary weight and bulk.

The long, narrow jaws give substantially full bearing on square nuts. The round handle has tapered end for easy insertion into bolt holes when bringing same into line.

The abrupt offset and angle of handle provide for clearance of obstructions and safety to the operator's hands. The wrench is particularly well balanced. When thrust into scabbard or belt-loop, the "step-up" of the round above the flat part of handle acts as a stop, yet is readily released.

Especially adapted to heavy automotive work, where unusual leverage is required.

Tapered tang on end of handle is useful in locating and lining-up holes in frame, axle pads, fender bolt holes, etc.

Particularly serviceable on Anchor Nuts, Bendix Brakes—Axe-shaft Nuts—Bumper Bolts and Nuts, Bus and Truck—Frame Members—King-bolts and Nuts—Spring-clip ("U" Bolt) Nuts—Spring-shackle Bolts and Nuts—Tire and Luggage-carrier Bolts and Nuts, Bus and Truck—etc.

Drop-Forged from Selected Alloy Steel, heat-treated and finished in baked gray enamel all over.

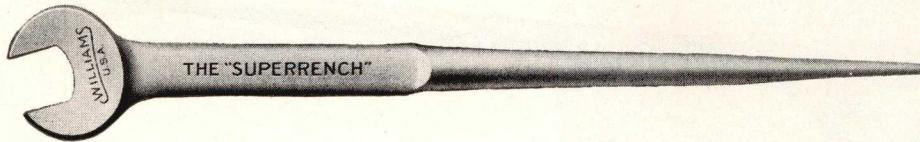
No.	Nominal Opening	For U. S. Std. Nut; Size Bolt	Amer. Std. Reg. Nut; Size Bolt	Extreme Length, Approx.	Thick- ness Head	Handle Offset		Weight Each, Lbs.
						At Head	At End	
1905	7/8	1/2	9/16	14 1/2	17/32	1	1 7/8	1.2
1906B	1	.....	5/8	14 1/2	17/32	1	1 7/8	1.2
1907	1 1/16	5/8	.....	17	5/8	1 1/8	2 3/8	1.9
1907A	1 1/8	.....	3/4	17	5/8	1 1/8	2 3/8	1.9
1908	1 1/4	3/4	.....	19	11/16	1 1/4	2 3/4	2.8
1908A	1 5/16	.....	7/8	19	11/16	1 1/4	2 3/4	2.8
1909	1 7/16	7/8	.....	21	3/4	1 3/8	3 1/16	4.1
1909A	1 1/2	.....	1	21	3/4	1 3/8	3 1/16	4.1
1910	1 5/8	1	.....	23	13/16	1 1/2	3 3/8	5.6
1910A	1 11/16	.....	1 1/8	23	13/16	1 1/2	3 3/8	5.6
1911	1 13/16	1 1/8	.....	25	7/8	1 5/8	3 11/16	7.9
1911A	1 7/8	.....	1 1/4	25	7/8	1 5/8	3 11/16	7.9
1912	2	1 1/4	.....	25	7/8	1 5/8	3 11/16	7.9

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "SUPER RENCHES"
Selected Alloy Steel

CONSTRUCTION PATTERN

15° Angle



These wrenches have been made especially to meet the needs of structural workers. The slim design provides ample strength and leverage without unnecessary weight and bulk.

The long, narrow jaws give substantially full bearing on square nuts. The round handle has tapered end for easy insertion into bolt holes when bringing same into line.

Especially adapted to heavy automotive work, where unusual leverage is required.

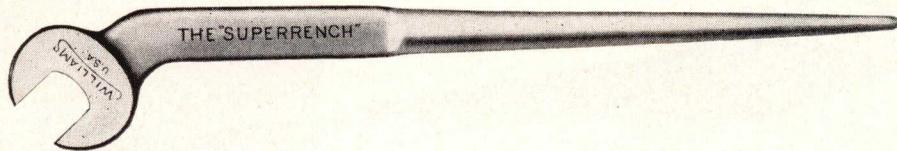
Tapered tang on end of handle is useful in locating and lining-up holes in frame, axle pads, fender bolt holes, etc.

Particularly serviceable on Anchor Nuts, Bendix Brakes—Axe-shaft Nuts—Bumper Bolts and Nuts, Bus and Truck—Frame Members — King-bolts and Nuts — Spring-clip ("U" Bolt) Nuts—Spring-shackle Bolts and Nuts — Tire and Luggage-carrier Bolts and Nuts, Bus and Truck — etc.

Drop-Forged from Selected Alloy Steel, heat-treated and finished in baked gray enamel all over.

No.	Nominal Opening	For U. S. Std. Nut; Size Bolt	For S.A.E. Std. Nut and Cap Screw	For Amer. Std. Reg. Nut; Size Bolt	Extreme Length, Approx.	Weight Each, Lbs.
1205	7/8	1/2	9/16	9/16	14 1/2	1.
1206B	1	.....	.....	5/8	14 1/2	1.
1207	1 1/16	5/8	3/4	.....	17	1.8
1207A	1 1/8	.....	.....	3/4	17	1.8
1208	1 1/4	3/4	7/8	.....	19	2.7
1208A	1 5/16	.....	.....	7/8	19	2.7
1209	1 7/16	7/8	1	.....	21	3.6
1209A	1 1/2	.....	.....	1	21	3.6
1210	1 5/8	1	1 1/8	.....	23	5.1
1211	1 13/16	1 1/8	1 1/4	.....	25	7.
1212	2	1 1/4	1 3/8	.....	25	7.

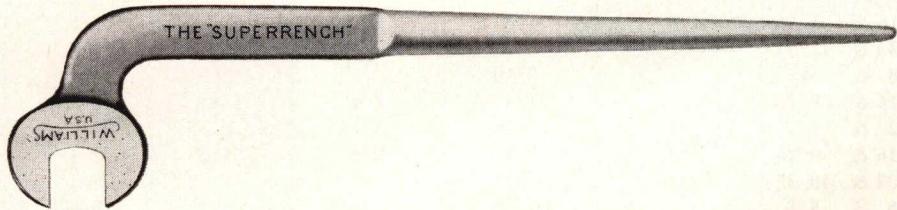
WILLIAMS' ♦ "SUPERRENCHES"
15° ANGLE CONSTRUCTION PATTERN
45° BENT HANDLE



These wrenches are particularly useful on flange and pipe line work in refineries, chemical plants and industries using processing equipment. Drop-Forged from Selected Alloy Steel, heat-treated and finished in baked gray enamel all over.

No.	Nominal Opening	For U. S. Std. Nut; Size Bolt	For S.A.E. Std. Nut and Cap Screw	For Amer. Std. Reg. Nut; Size Bolt	Extreme Length, Approx.	Weight Each, Lbs.
X-1205	7/8	1/2	9/16	9/16	14	1.
X-1207	1 1/16	5/8	3/4	.....	16 1/2	1.8
X-1208	1 1/4	3/4	7/8	.....	18 1/2	2.7
X-1209	1 7/16	7/8	1	.....	20 3/8	3.6
X-1210	1 5/8	1	1 1/8	.....	22 1/4	5.1
X-1211	1 13/16	1 1/8	1 1/4	.....	24	7.
X-1212	2	1 1/4	1 3/8	.....	24	7.

15° ANGLE CONSTRUCTION PATTERN
90° BENT HANDLE



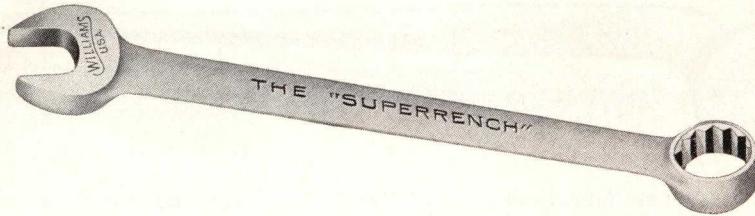
Drop-Forged from Selected Alloy Steel, heat-treated and finished in baked gray enamel all over.

No.	Nominal Opening	For U. S. Std. Nut; Size Bolt	For S.A.E. Std. Nut and Cap Screw	For Amer. Std. Reg. Nut; Size Bolt	Extreme Length, Approx.	Weight Each, Lbs.
Z-1205	7/8	1/2	9/16	9/16	12	1.
Z-1207	1 1/16	5/8	3/4	.....	14 5/8	1.8
Z-1208	1 1/4	3/4	7/8	.....	16 3/8	2.7
Z-1209	1 7/16	7/8	1	.....	17 7/8	3.6
Z-1210	1 5/8	1	1 1/8	.....	19 1/2	5.1
Z-1211	1 13/16	1 1/8	1 1/4	.....	21	7.
Z-1212	2	1 1/4	1 3/8	.....	21	7.

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "SUPERRENCHES"
Selected Alloy Steel

OPEN END - BOX PATTERN
For Close Quarters



These long, slender "Superrenches", combining two styles of head are designed especially for use in close quarters and tight corners.

Open end is thin, with slim jaws and opening at angle of 15°.

Box end, with 12-point opening and thin walls, is offset from plane of handle; see illustration.

Same size opening in both heads; **where one can not operate, the other will**. Each rotates hex nuts when the wrench can swing only 30°.

Drop-forged from Selected Alloy Steel, heat-treated, chrome-plated; faces of open end buffed.

Sold individually and in Sets.

No.	Nominal Openings	For Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	For Amer. Std. Hex Head Cap Screws; Diam. Screws	For Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	For Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length, Approx.	Weight Each, Lbs.	No.
1158	1/4 & 1/4				* No. 4	3 5/8		1158
1159	5/16 & 5/16	1/8	1/8			4 3/8	.05	1159
1159A	11/32 & 11/32				* No. 8	4 3/8	.05	1159A
1160	3/8 & 3/8		3/16			5	.08	1160
1161	7/16 & 7/16		1/4	1/4	1/4	5 3/8	.09	1161
1162	1/2 & 1/2	1/4	5/16	5/16		6	.13	1162
1163	9/16 & 9/16		3/8	3/8	5/16	6 3/4	.21	1163
1163A	19/32 & 19/32	5/16				6 3/4	.21	1163A
1164	5/8 & 5/8		7/16	7/16	3/8	7 5/8	.28	1164
1165	11/16 & 11/16	3/8				8 1/2	.38	1165
1166	3/4 & 3/4		1/2	1/2	7/16	9 1/2	.5	1166
1166A	25/32 & 25/32	7/16				9 1/2	.5	1166A
1167A	13/16 & 13/16		9/16		1/2	10 1/2	.75	1167A
1167	7/8 & 7/8	1/2	5/8	9/16	9/16	10 1/2	.75	1167
1168	15/16 & 15/16	9/16		5/8		13	1.1	1168
1170	1 & 1		3/4		5/8	13	1.1	1170
1171	1 1/16 & 1 1/16	5/8		3/4		15	1.8	1171
1172	1 1/8 & 1 1/8		7/8		3/4	15	1.6	1172
1173	1 1/4 & 1 1/4	3/4		7/8		18	2.6	1173
1174	1 5/16 & 1 5/16		1		7/8	18	2.6	1174
1176A	1 3/8 & 1 3/8					21	4.	1176A
1176	1 7/16 & 1 7/16	7/8		1		21	3.9	1176
1178	1 1/2 & 1 1/2		1 1/8		1	23		1178
1180	1 5/8 & 1 5/8	1		1 1/8		25		1180

* Amer. Std. Machine Screw and Stove Bolt Nuts.

♦ REGISTERED TRADE MARK

1-52

WILLIAMS' ♦ "SUPER RENCH" SETS
Selected Alloy Steel



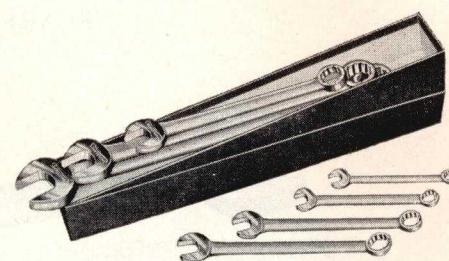
SET No. 1170S

In Leatherette Roll
In Cardboard Box

Weight, 2.2 Lbs.

CONTENTS

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.)	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nuts (S.A.E.)	Amer. Std. REGULAR Nuts	Length Approx.
1161	7/16 & 7/16	.....	1/4	1/4	1/4	5-3/8
1162	1/2 & 1/2	1/4	5/16	5/16	.....	6
1163	9/16 & 9/16	.....	3/8	3/8	5/16	6-3/4
1164	5/8 & 5/8	.....	7/16	7/16	3/8	7-5/8
1166	3/4 & 3/4	.....	1/2	1/2	7/16	9-1/2
1167	7/8 & 7/8	1/2	5/8	9/16	9/16	10-1/2



SET No. 1171S

In Cardboard Box

Weight, 6.6 lbs.

CONTENTS

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.)	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nuts (S.A.E.)	Amer. Std. REGULAR Nuts	Length Approx.
1162	1/2 & 1/2	1/4	5/16	5/16	.....	6
1163A	19/32 & 19/32	5/16	.....	.....	.....	6-3/4
1165	11/16 & 11/16	3/8	.....	.....	.....	8-1/2
1166A	25/32 & 25/32	7/16	.....	.....	.....	9-1/2
1167	7/8 & 7/8	1/2	5/8	9/16	9/16	10-1/2
1171	1-1/16 & 1-1/16	5/8	.....	3/4	.....	15
1173	1-1/4 & 1-1/4	3/4	.....	7/8	.....	18



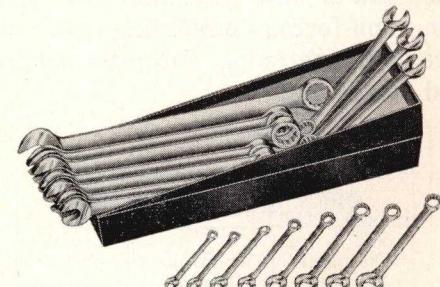
SET No. 1173S

In Leatherette Roll
In Cardboard Box

Weight, 1 Lb.

CONTENTS

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.)	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nuts (S.A.E.)	Amer. Std. REGULAR Nuts	Length Approx.
1159	5/16 & 5/16	1/8	1/8	.....	.....	4-3/8
1159A	11/32 & 11/32	.....	.....	.....	*No. 8	4-3/8
1160	3/8 & 3/8	.....	.....	3/16	.....	5
1161	7/16 & 7/16	.....	.....	1/4	1/4	5-3/8
1162	1/2 & 1/2	1/4	5/16	5/16	5/16	6
1163	9/16 & 9/16	3/8	3/8	5/16	3/8	6-3/4
1164	5/8 & 5/8	7/16	7/16	3/8	5/16	6-3/4



SET No. 1172S

In Cardboard Box

Weight, 12.9 Lbs.

CONTENTS

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.)	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nuts (S.A.E.)	Amer. Std. REGULAR Nuts	Length Approx.
1159	5/16 & 5/16	1/8	1/8	.....	.....	4-3/8
1159A	11/32 & 11/32	.....	.....	.....	*No. 8	4-3/8
1160	3/8 & 3/8	.....	.....	3/16	.....	5
1161	7/16 & 7/16	.....	.....	1/4	1/4	5-3/8
1162	1/2 & 1/2	1/4	5/16	5/16	5/16	6
1163	9/16 & 9/16	3/8	3/8	5/16	3/8	6-3/4
1164	5/8 & 5/8	7/16	7/16	3/8	5/16	6-3/4
1166A	25/32 & 25/32	7/16	.....	7/16	7/16	7-5/8
1167	7/8 & 7/8	1/2	5/8	9/16	9/16	8-1/2
1167A	13/16 & 13/16	.....	.....	9/16	1/2	9-1/2
1168	15/16 & 15/16	9/16	.....	5/8	.....	10-1/2
1169	1 & 1	.....	.....	3/4	5/8	13
1170	1-1/16 & 1-1/16	5/8	.....	3/4	5/8	13
1171	1-1/8 & 1-1/8	7/8	.....	3/4	5/8	13
1172	1-1/4 & 1-1/4	3/4	.....	7/8	3/4	15
1173	1-1/4 & 1-1/4	3/4	.....	7/8	3/4	15

* Amer. Std. Machine Screw and Stove Bolt Nuts.

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "SUPERRENCHES"
Selected Alloy Steel

FLARE NUT PATTERN



Long and slender, these "Superrenches", combine two styles of head. They are designed especially for use on the non-ferrous flare nuts and fittings found on hydraulic and pneumatic tubing assemblies such as are encountered in air conditioning, automotive, aeronautical, diesel, marine and refrigeration work. Open-box end, has a 12-point opening offset 15° from plane of handle with a tube opening slot at $22\frac{1}{2}^{\circ}$ to the axis of the handle. Thick head face is an assurance against marred fittings in final tightening.

Open end is thin, with slim jaws and opening at angle of 15° . Designed especially for holding non-ferrous union fittings found in tubing work and fast adjustment of flare nuts before final tightening. Drop-forged from Selected Alloy Steel, heat-treated and chrome-plated, heads buffed.

No.	OPEN END		OPEN-BOX END				Extreme Length, Approx.	Weight Each, Lbs.
	Nominal Opening	Thickness Head	Nominal Opening	Outside Diameter	Thickness Head	Max. Tube Clearance		
1312	3/8	3/16	3/8	21/32	5/16	1/4	5 5/8	.07
1314	7/16	13/64	7/16	25/32	11/32	9/32	6	.1
1316	1/2	7/32	1/2	29/32	7/16	3/8	6 3/8	.17
1318	9/16	15/64	9/16	31/32	7/16	7/16	6 7/8	.19
1320	5/8	1/4	5/8	1 1/64	1/2	15/32	7 5/8	.25
1322	11/16	5/16	11/16	1 9/32	9/16	9/16	8 3/4	.44
1324	3/4	5/16	3/4	1 9/32	9/16	9/16	8 3/4	.44
1328	7/8	11/32	7/8	1 7/16	5/8	11/16	9 1/4	.54
1332	1	3/8	1	1 19/32	11/16	3/4	9 7/8	.69
1334	1 1/16	7/16	1 1/16	1 25/32	3/4	27/32	10 3/4	1.
1336	1 1/8	7/16	1 1/8	1 25/32	3/4	27/32	10 3/4	1.

DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' "SUPERRENCHES"
Selected Alloy Steel

REGULAR 12-POINT BOX PATTERN FOR CLOSE QUARTERS

12-Point Opening — 7-1/2° Angle



These "Superrenches" with thin head walls, are particularly efficient in close quarters and for general service. They grip nuts on six sides and prevent slipping. Will rotate hex nuts where the wrench can be swung only 15°—HALF the space required by conventional wrenches. Drop-forged from Selected Alloy Steel—heat-treated.

Finish—Chrome-plate over nickel, heads bright.

Handle can be bent above head at angles of 45° to 90° from opening, at an additional charge; see illustration.

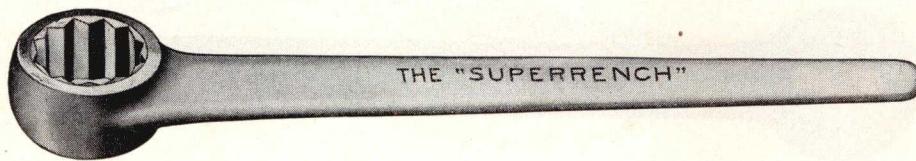
No.	Nominal Opening Across Flats	For Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Amer. Std. Hex Head Cap Screw; Diam. Screw	For Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	For Amer. Std. REGULAR Nut; Size Bolt	Ex- treme Length Approx.	Head		Wgt. Each, Lbs.
							Thickness	Outside Diam.	
1800A	7/16	.....	1/4	1/4	1/4	3 1/2	7/32	45/64	.07
1801	1/2	1/4	5/16	5/16	.....	4	17/64	27/32	.11
1802A	9/16	.....	3/8	3/8	5/16	4 7/8	5/16	31/32	.19
1802	19/32	5/16	.....	.....	.....	4 7/8	5/16	63/64	.19
1803A	5/8	.....	7/16	7/16	3/8	5 7/8	23/64	1 1/16	.31
1803	11/16	3/8	.....	.....	.....	5 7/8	23/64	1 9/64	.31
1804A	3/4	.....	1/2	1/2	7/16	6 7/8	13/32	1 1/4	.36
1804	25/32	7/16	.....	.....	.....	6 7/8	13/32	1 9/32	.36
1805A	13/16	.....	9/16	.....	1/2	7 3/4	29/64	1 23/64	.45
1805	7/8	1/2	5/8	9/16	9/16	7 3/4	29/64	1 27/64	.45
1806	15/16	9/16	.....	5/8	.....	8 3/4	1/2	1 19/32	.68
1806B	1	.....	3/4	.....	5/8	8 3/4	1/2	1 19/32	.68
1807	1 1/16	5/8	.....	3/4	.....	9 7/8	9/16	1 25/32	.89
1807A	1 1/8	.....	7/8	.....	3/4	9 7/8	9/16	1 25/32	.89
1808	1 1/4	3/4	.....	7/8	.....	11 1/2	9/16	2 1/16	1.5
1808A	1 5/16	.....	1	.....	7/8	11 1/2	9/16	2 1/16	1.5
1809	1 7/16	7/8	.....	1	.....	13 3/8	21/32	2 3/8	1.9
1809A	1 1/2	.....	1 1/8	.....	1	13 3/8	21/32	2 3/8	1.9
1810	1 5/8	1	.....	1 1/8	.....	15 1/4	3/4	2 5/8	2.9
1810A	1 11/16	.....	1 1/4	.....	1 1/8	15 1/4	3/4	2 5/8	2.9
1811	1 13/16	1 1/8	.....	1 1/4	.....	17	13/16	2 29/32	3.1
1811A	1 7/8	.....	.....	1 3/8	1 1/4	17	13/16	2 29/32	3.1
1812	2	1 1/4	.....	.....	.....	19	15/16	3 1/4	4.3

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "SUPER RENCHES"
Selected Alloy Steel

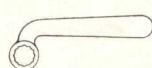
HEAVY 12-POINT BOX PATTERN FOR CLOSE QUARTERS

12-Point Opening— $7\frac{1}{2}^{\circ}$ Angle



These "Superrenches" with thin head walls, are particularly efficient in close quarters and for general service. They grip nuts on six sides and prevent slipping. Will rotate hex nuts where the wrench can be swung only 15° —HALF the space required by conventional wrenches. Drop-forged from Selected Alloy Steel—heat-treated.

Finish — Chrome-plate over nickel, heads bright.

 Handle can be bent above head at angles of 45° to 90° from opening, at an additional charge; see illustration.

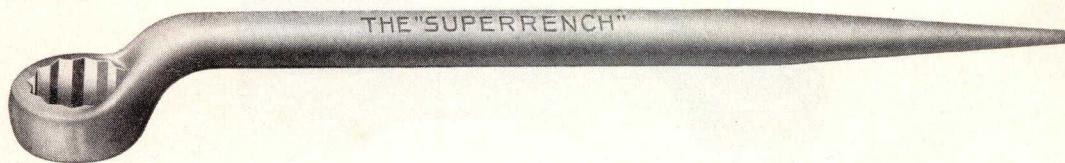
No.	Nominal Opening Across Flats	For Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Amer. Std. Hex Head Cap Screw; Diam. Screw	For Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	For Amer. Std. REGULAR Nut; Size Bolt	Ex- treme Length Approx.	Head		Wgt. Each, Lbs.
							Thickness	Outside Diam.	
H1808	1 1/4	3/4	.....	7/8	.....	11 1/2	13/16	2 1/16	1.6
H1808A	1 5/16	.....	1	.....	7/8	11 1/2	13/16	2 1/16	1.6
H1809	1 7/16	7/8	.....	1	.....	13 3/8	15/16	2 3/8	2.3
H1809A	1 1/2	.....	1 1/8	.....	1	13 3/8	15/16	2 3/8	2.3
H1810	1 5/8	1	.....	1 1/8	.....	15 1/4	1 1/8	2 5/8	3.1
H1810A	1 11/16	.....	1 1/4	.....	1 1/8	15 1/4	1 1/8	2 5/8	3.1
H1811	1 13/16	1 1/8	.....	1 1/4	.....	17	1 1/4	2 15/16	3.8
H1811A	1 7/8	.....	.....	.....	1 1/4	17	1 1/4	2 15/16	3.8
H1812	2	1 1/4	.....	1 3/8	.....	19	1 3/8	3 1/4	5.4
H1813	2 3/16	1 3/8	.....	1 1/2	.....	21	1 1/2	3 1/2	6.5
H1813A	2 1/4	.....	.....	.....	1 1/2	21	1 1/2	3 1/2	6.5
H1814	2 3/8	1 1/2	.....	.....	.....	23	1 5/8	3 3/4	7.8
H1815	2 9/16	1 5/8	.....	.....	.....	25	1 3/4	4 1/8	10.3
H1815A	2 5/8	.....	.....	.....	1 3/4	25	1 3/4	4 1/8	10.3
H1816	2 3/4	1 3/4	.....	.....	.....	27	1 7/8	4 9/16	12.5
H1817A	3	.....	.....	.....	2	30	2	4 13/16	16.3
H1817	3 1/8	2	.....	.....	.....	30	2	4 13/16	16.3

♦ REGISTERED TRADE MARK

1-52

WILLIAMS' ♦ "SUPER RENCHES"
Selected Alloy Steel

STRUCTURAL BOX PATTERN
With 12-Point Openings



This Williams' Structural Box "Superrench" is designed to bring greater safety to structural work. The 12-point Box Head insures a firm hold on the nut and it is offset to give maximum clearance. The long sturdy tapered handle provides ample strength and leverage, and can easily be inserted into bolt holes to bring them into line.

These rugged wrenches are also adapted to heavy industrial and automotive work where unusual leverage is necessary.

Drop-forged from Selected Alloy Steel, heat-treated, and finished in baked gray enamel all over.

No.	Nominal Opening	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Extreme Length, Approx.	Head		Handle Offset		Weight Each, Lbs.
				Thickness	Outside Diameter	At Head	At End	
8905A	13/16	.....	12	5/8	1 15/32	1 1/8	1 25/32	1.2
8905	7/8	1/2	12	5/8	1 15/32	1 1/8	1 25/32	1.2
8906	15/16	9/16	12	3/4	1 5/8	1 1/4	1 61/64	1.4
8906B	1	.....	12	3/4	1 5/8	1 1/4	1 61/64	1.4
8907	1 1/16	5/8	15	13/16	1 53/64	1 5/16	2 9/64	2.1
8907A	1 1/8	.....	15	13/16	1 53/64	1 5/16	2 9/64	2.1
8908	1 1/4	3/4	17	7/8	2 5/64	1 7/16	2 21/64	2.5
8908A	1 5/16	.....	17	7/8	2 5/64	1 7/16	2 21/64	2.5
8909	1 7/16	7/8	21	1	2 3/8	1 1/2	2 3/4	3.8
8909A	1 1/2	.....	21	1	2 3/8	1 1/2	2 3/4	3.8
8910	1 5/8	1	22	1 1/16	2 5/8	1 5/8	2 7/8	4.6
8910A	1 11/16	.....	22	1 1/16	2 5/8	1 5/8	2 7/8	4.6
8911	1 13/16	1 1/8	23	1 1/8	2 29/32	1 11/16	3	5.8
8911A	1 7/8	.....	23	1 1/8	2 29/32	1 11/16	3	5.8
8912	2	1 1/4	24 1/2	1 1/4	3 5/32	1 13/16	3 5/32	6.5
8913	2 3/16	1 3/8	26	1 3/8	3 15/32	2	3 1/2	8.4
8914	2 3/8	1 1/2	28	1 1/2	3 23/32	2 1/8	3 11/16	9.5
8915	2 9/16	1 5/8	30	1 5/8	3 29/32	2 1/4	3 13/16	10.6
8916	2 3/4	1 3/4	30	1 3/4	4 5/32	2 3/8	3 29/32	12.1

NOTE: These Wrenches can be supplied with heads bent up to 90° right or left of handle at extra charge.

♦ REGISTERED TRADE MARK

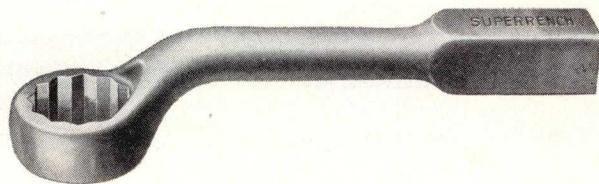
DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPER RENCHES"
Selected Alloy Steel

STRIKING FACE BOX—OFFSET PATTERN
 With 12-Point Openings



The Striking Face Box "Superrench" is particularly well adapted for heavy industrial and automotive work in close quarters where large nuts must be set up tight or frozen nuts loosened.

Offset head gives ample nut clearance. Drop-forged from Selected Alloy Steel, properly heat-treated to withstand the necessary shocks. Finished in baked gray enamel all over.

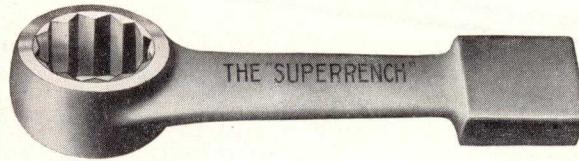
No.	Nominal Opening	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGULAR Nut; Size Bolt	Ex-treme Length, Approx.	Head		Weight Each, Lbs.
		Thickness	Outside Diameter					
8807	1 1/16	5/8	3/4	.....	10 1/2	13/16	1 27/32	2.2
8807A	1 1/8	.....	.....	3/4	10 1/2	13/16	1 27/32	2.2
8808	1 1/4	3/4	7/8	.....	11	7/8	2 3/32	2.6
8808A	1 5/16	.....	.....	7/8	11	7/8	2 3/32	2.6
8809	1 7/16	7/8	1	.....	11 1/2	1	2 3/8	3.6
8809A	1 1/2	.....	.....	1	11 1/2	1	2 3/8	3.6
8810	1 5/8	1	1 1/8	.....	12	1 1/16	2 5/8	3.9
8810A	1 11/16	.....	.....	1 1/8	12	1 1/16	2 5/8	3.9
8811	1 13/16	1 1/8	1 1/4	.....	12 1/2	1 1/8	2 29/32	5.4
8811A	1 7/8	.....	.....	1 1/4	12 1/2	1 1/8	2 29/32	5.4
8812	2	1 1/4	1 3/8	.....	13	1 1/4	3 5/32	5.5
8813	2 3/16	1 3/8	1 1/2	.....	13 1/2	1 3/8	3 15/32	7.2
8813A	2 1/4	.....	.....	1 1/2	13 1/2	1 3/8	3 15/32	7.2
8814	2 3/8	1 1/2	.....	.....	14	1 1/2	3 23/32	7.9
8815	2 9/16	1 5/8	.....	.....	14 1/2	1 5/8	3 29/32	9.7
8815A	2 5/8	.....	.....	1 3/4	14 1/2	1 5/8	3 29/32	9.7
8816	2 3/4	1 3/4	.....	.....	15	1 3/4	4 5/32	10.8
8816B	2 15/16	1 7/8	.....	.....	16	1 7/8	4 21/32	10.8
8817A	3	.....	.....	2	16 1/2	2	4 15/16	11.9
8817	3 1/8	2	.....	.....	16 1/2	2	4 15/16	11.9

♦ REGISTERED TRADE MARK

1-52

WILLIAMS' ♦ "SUPERRENCHES"
Selected Alloy Steel

HEAVY STRIKING FACE 12-POINT BOX PATTERN
12-Point Opening—7-1/2° Angle—For Close Quarters



These Striking Face "Superrenches," with thin head walls, are particularly efficient in close quarters where large nuts must be set up tight, or frozen nuts loosened. They grip nuts on six sides and prevent slipping. The heads, approximately as thick as the nuts they handle, afford extra strength and full bearing in severe service. Will rotate hex nuts where the wrench can be swung only 15°—HALF the space required by conventional wrenches. Drop-forged from Selected Alloy Steel—heat-treated. Finished in baked gray enamel all over.

No.	Nominal Opening Across Flats	For Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Amer. Std. Hex Head Cap Screw; Diam. Screw	For Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	For Amer. Std. REGULAR Nut; Size Bolt	Ex- treme Length, Approx.	Head		Wgt. Each, Lbs.
							Thick- ness	Outside Diam.	
SFH-1808	1 1/4	3/4		7/8		7	13/16	2 1/16	1.4
SFH-1808A	1 5/16		1		7/8	7	13/16	2 1/16	1.4
SFH-1809	1 7/16	7/8		1		8	15/16	2 3/8	2.1
SFH-1809A	1 1/2		1 1/8		1	8	15/16	2 3/8	2.1
SFH-1810	1 5/8	1		1 1/8		9	1 1/8	2 5/8	3.
SFH-1810A	1 11/16		1 1/4		1 1/8	9	1 1/8	2 5/8	3.
SFH-1811	1 13/16	1 1/8		1 1/4		10	1 1/4	2 15/16	3.9
SFH-1811A	1 7/8				1 1/4	10	1 1/4	2 15/16	3.9
SFH-1812	2	1 1/4		1 3/8		11	1 3/8	3 1/4	5.5
SFH-1813	2 3/16	1 3/8		1 1/2		12	1 1/2	3 1/2	6.8
SFH-1813A	2 1/4				1 1/2	12	1 1/2	3 1/2	6.8
SFH-1814	2 3/8	1 1/2				13	1 5/8	3 3/4	8.2
SFH-1815	2 9/16	1 5/8				14	1 3/4	4 1/8	10.8
SFH-1815A	2 5/8				1 3/4	14	1 3/4	4 1/8	10.8
SFH-1816	2 3/4	1 3/4				15	1 7/8	4 9/16	13.5
SFH-1817A	3				2	17	2	4 13/16	18.2
SFH-1817	3 1/8	2				17	2	4 13/16	18.2

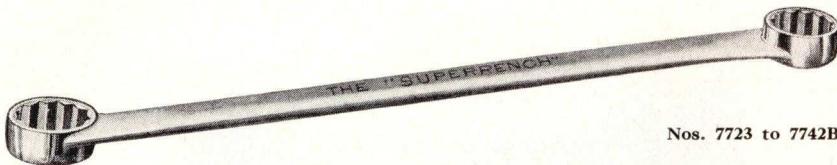
♦ REGISTERED TRADE MARK

DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' 12-POINT BOX "SUPERRENCHES"
Selected Alloy Steel

15° ANGLE OFFSET PATTERNS



Nos. 7723 to 7742B

These 12-Point Box "Superrenches" are particularly well adapted to work in close quarters. Thin head walls permit use where clearance is extremely limited. The openings grip hex nuts on six sides, preventing all slipping and rounding of the nuts' corners. The Long Pattern provides unusual reach and leverage.

Each head has a 12-point opening; consequently, hex nuts can be completely rotated where the swing of the wrench is limited to 30°—less than 1/10 of a full turn.

Drop-forged from Selected Alloy Steel, heat-treated, chrome plate over nickel, heads bright.

No.	Nominal Openings	For Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	For Amer. Std. Hex Head Cap Screws; Diam. Screws	For Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	For Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length, Approx.	Weight Each, Lbs.	No.
LONG PATTERN—Different Opening in Each Head								
7723	3/8 & 7/16	3/16 & 1/4	5/16	1/4	1/4	7 3/8	.13	7723
7023	13/32 & 1/2	3/16 & 1/4	1/4	1/4 & 5/16	5/16	7 3/4	.16	7023
7725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	7 3/4	.16	7725
7725A	7/16 & 9/16	1/4 & 3/8	1/4 & 3/8	1/4 & 5/16	8 1/4	.22	7725A	
7725B	1/2 & 9/16	1/4 & 3/8	5/16 & 3/8	5/16 & 3/8	5/16	8 1/4	.22	7725B
7025	1/2 & 19/32	1/4 & 5/16	5/16	5/16	5/16	8 1/4	.22	7025
7727	9/16 & 5/8	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	5/16 & 3/8	9 1/4	.31	7727
7027	19/32 & 11/16	5/16 & 3/8	3/8	7/16	7/16	10 1/2	.51	7027
7727A	5/8 & 11/16	3/8	7/16	7/16	3/8	10 1/2	.48	7727A
7729	5/8 & 3/4	7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	3/8 & 7/16	10 1/2	.48	7729
7029B	11/16 & 3/4	3/8	1/2	7/16	7/16	10 1/2	.51	7029B
7029	11/16 & 25/32	3/8 & 7/16	7/16	1/2	1/2	10 1/2	.51	7029
7729A	3/4 & 25/32	7/16	1/2	1/2	7/16	12	.66	7729A
7030	11/16 & 7/8	3/8 & 1/2	5/8	9/16	9/16	12	.66	7030
7731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	12	.66	7731A
7031B	25/32 & 13/16	7/16	9/16	9/16	1/2	12	.66	7031B
7031	25/32 & 7/8	7/16 & 1/2	5/8	9/16	9/16	12	.66	7031
7731B	13/16 & 7/8	1/2	9/16 & 5/8	9/16	1/2 & 9/16	12	.66	7731B
7033A	7/8 & 15/16	1/2 & 9/16	5/8	9/16 & 5/8	9/16	13 3/4	.95	7033A
7733	7/8 & 1	1/2	5/8 & 3/4	9/16	9/16 & 5/8	13 3/4	.95	7733
7033C	15/16 & 1	9/16	3/4	5/8	5/8	13 3/4	.95	7033C
7034	7/8 & 1 1/16	1/2 & 5/8	5/8	9/16 & 3/4	9/16	15 1/2	1.2	7034
7034A	15/16 & 1 1/16	9/16 & 5/8	5/8	5/8 & 3/4	5/8	15 1/2	1.3	7034A
7735	1 & 1 1/8	3/4 & 7/8	3/4 & 7/8	5/8 & 3/4	5/8 & 3/4	17 1/4	2.	7735
7735A	1 1/16 & 1 1/8	5/8	7/8	3/4	3/4	17 1/4	2.	7735A
7037	1 1/16 & 1 1/4	5/8 & 3/4	7/8 & 1	3/4 & 7/8	3/4 & 7/8	17 1/4	1.8	7037
7037A	1 1/8 & 1 5/16	7/8 & 1	7/8 & 1	3/4 & 7/8	3/4 & 7/8	19	2.4	7037A
7039B	1 1/4 & 1 5/16	3/4	1	7/8	7/8	19	2.4	7039B
7039	1 1/4 & 1 7/16	3/4 & 7/8	7/8 & 1	7/8 & 1	7/8 & 1	19	2.4	7039
7039A	1 5/16 & 1 1/2	1	1 & 1 1/8	1	1 & 1 1/8	19	2.4	7039A
7040B	1 7/16 & 1 1/2	7/8	1 1/8	1	1	21	5.6	7040B
7041	1 7/16 & 1 5/8	7/8 & 1	1 1/8	1 & 1 1/8	1	23	5.6	7041
7742B	1 1/2 & 1 11/16	1 1/8 & 1 1/4	1 1/8 & 1 1/4	1	1 & 1 1/8	23	5.6	7742B

REGISTERED TRADE MARK

1-52

DROP-FORGINGS AND WILLIAMS DROP-FORGED TOOLS

WILLIAMS' 12-POINT BOX + "SUPERRENCHES"
Selected Alloy Steel

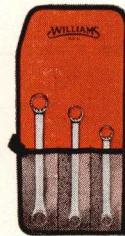
15° ANGLE OFFSET PATTERNS



Nos. 6723 to 6727

No.	Nominal Openings	For Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	For Amer. Std. Hex Head Cap Screws; Diam. Screws	For Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	For Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length, Approx.	Weight Each, Lbs.	No.
SHORT PATTERN—Different Opening in Each Head								
6723	3/8 & 7/16	.....	3/16 & 1/4	1/4	1/4	4 1/2	.08	6723
6725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	5 1/2	.11	6725
6725A	7/16 & 9/16	.....	1/4 & 3/8	1/4 & 3/8	1/4 & 5/16	5 1/2	.14	6725A
6725B	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	5 1/2	.14	6725B
6025	1/2 & 19/32	1/4 & 5/16	5/16	5/16	.....	5 1/2	.14	6025
6727	9/16 & 5/8	.....	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6	.18	6727

12-POINT BOX + "SUPERRENCH" SETS
Selected Alloy Steel



SET No. 6703

In Leatherette Roll
In Cardboard Box
Weight, .44 Lb.

CONTENTS

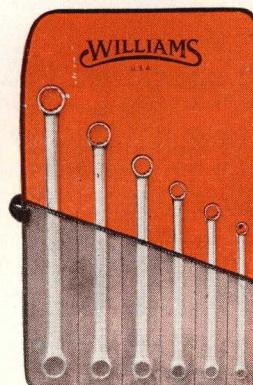
No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.)	Amer. Std. Hex Head Cap Screws	Amer. Std. LIGHT Nuts (S.A.E.)	Amer. Std. REGULAR Nuts	Length Approx.
6723	3/8 & 7/16	.....	3/16 & 1/4	1/4	1/4	4-1/2
6725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	5-1/2
6727	9/16 & 5/8	.....	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6

SET No. 7006

In Leatherette Roll
In Cardboard Box
Weight, 3.4 Lbs.

CONTENTS

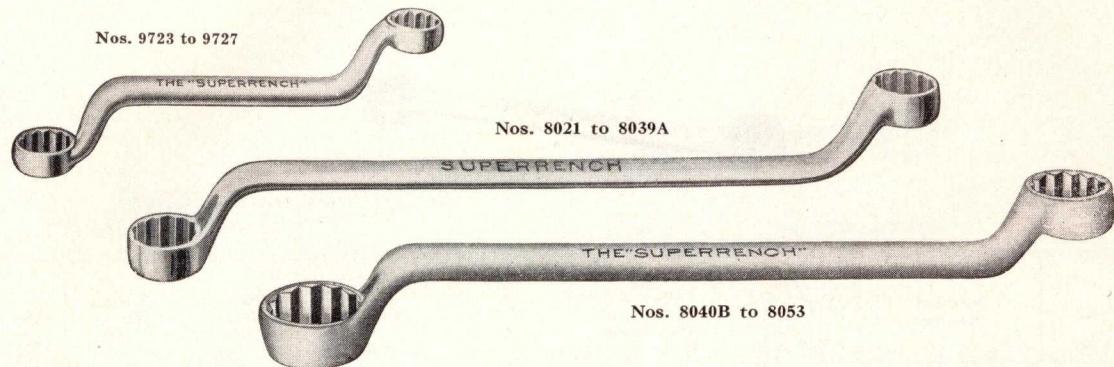
No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.)	Amer. Std. Hex Head Cap Screws	Amer. Std. LIGHT Nuts (S.A.E.)	Amer. Std. REGULAR Nuts	Length Approx.
7723	3/8 & 7/16	.....	3/16 & 1/4	1/4	1/4	7-3/8
7025	1/2 & 19/32	1/4 & 5/16	5/16	5/16	.....	8-1/4
7727	9/16 & 5/8	.....	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	9-1/4
7029	11/16 & 25/32	3/8 & 7/8	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	10-1/2
7731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	12
7033C	15/16 & 1	9/16	3/4	5/8	5/8	13-3/4



◆ REGISTERED TRADE MARK

WILLIAMS' 12-POINT BOX "SUPERRENCHES"
Selected Alloy Steel

DOUBLE OFFSET PATTERNS



These 12-Point Box "Superrenches" are particularly well adapted to work in close quarters. Thin head walls permit use where clearance is extremely limited. The openings grip hex nuts on six sides, preventing all slipping and rounding of the nuts' corners. The Long Pattern provides unusual reach and leverage.

Each head has a 12-point opening; consequently, hex nuts can be completely rotated where the swing of the wrench is limited to 30°—less than 1/10 of a full turn.

Ideal for use on Connecting Rods, Main Bearings, Base, Cylinder Heads, Spring Clips and in awkward places.

Drop-forged from Selected Alloy Steel, heat-treated, chrome plate over nickel, heads bright. Nos. 8040B through 8053, Baked Gray enamel. Supplied in Whitworth Standard and Metric sizes also; see page 215.

No.	Nominal Openings	For Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	For Amer. Std. Hex Head Cap Screws; Diam. Screws	For Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	For Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length, Approx.	Weight Each, Lbs.	No.
LONG PATTERN—Different Opening in Each Head								
8021	5/16 & 13/32	1/8 & 3/16	1/8	.....	.....	7 1/4	.18	8021
8723	3/8 & 7/16	.....	3/16 & 1/4	1/4	1/4	7 3/4	.26	8723
8023	13/32 & 1/2	3/16 & 1/4	5/16	5/16	.....	8 1/4	.37	8023
8725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	8 1/4	.37	8725
8725A	7/16 & 9/16	.....	1/4 & 3/8	1/4 & 3/8	1/4 & 5/16	8 3/4	.43	8725A
8725B	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	8 3/4	.43	8725B
8025	1/2 & 19/32	1/4 & 5/16	5/16	5/16	.....	8 3/4	.43	8025
8727	9/16 & 5/8	.....	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	9 3/4	.59	8727
8027	19/32 & 11/16	5/16 & 3/8	.....	.....	.....	11	.84	8027
8727A	5/8 & 11/16	3/8	7/16	7/16	3/8	11	.8	8727A
8729	5/8 & 3/4	.....	7/16 & 1/2	7/16 & 1/2	3/8 & 7/16	11	.8	8729
8029B	11/16 & 3/4	3/8	1/2	1/2	7/16	11	.84	8029B
8029	11/16 & 25/32	3/8 & 7/16	.....	.....	.....	11	.84	8029
8729A	3/4 & 25/32	7/16	1/2	1/2	7/16	12 1/2	1.	8729A
8030	11/16 & 7/8	3/8 & 1/2	5/8	9/16	9/16	12 1/2	1.	8030
8731	3/4 & 13/16	.....	1/2 & 9/16	1/2	7/16 & 1/2	12 1/2	1.	8731
8731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	12 1/2	1.	8731A
8031B	25/32 & 13/16	7/16	9/16	.....	1/2	12 1/2	1.	8031B
8031	25/32 & 7/8	7/16 & 1/2	5/8	9/16	9/16	12 1/2	1.	8031
8731B	13/16 & 7/8	1/2	9/16 & 5/8	9/16	1/2 & 9/16	12 1/2	1.	8731B
8033A	7/8 & 15/16	1/2 & 9/16	5/8	9/16 & 5/8	9/16	13 1/2	1.1	8033A
8733	7/8 & 1	1/2	5/8 & 3/4	9/16	9/16 & 5/8	13 1/2	1.4	8733
8033C	15/16 & 1	9/16	3/4	5/8	5/8	14 1/2	1.1	8033C
8034	7/8 & 1 1/16	1/2 & 5/8	5/8	9/16 & 3/4	9/16	15 1/2	1.3	8034
8034A	15/16 & 1 1/16	9/16 & 5/8	.....	5/8 & 3/4	.....	15 1/2	1.3	8034A
8735	1 & 1 1/8	.....	3/4 & 7/8	.....	5/8 & 3/4	17	2.3	8735
8735A	1 1/16 & 1 1/8	5/8	7/8	3/4	3/4	17	2.3	8735A
8037	1 1/16 & 1 1/4	5/8 & 3/4	7/8 & 1	3/4 & 7/8	.....	17	2.1	8037
8037A	1 1/8 & 1 5/16	.....	7/8 & 1	3/4 & 7/8	19	3.3	8037A	
8039B	1 1/4 & 1 5/16	3/4	1	7/8	7/8	19	3.3	8039B
8039	1 1/4 & 1 7/16	3/4 & 7/8	.....	7/8 & 1	.....	19	3.3	8039
8039A	1 5/16 & 1 1/2	.....	1 & 1 1/8	.....	7/8 & 1	19	3.3	8039A

DROP-FORGINGS AND WILLIAMS DROP-FORGED TOOLS

WILLIAMS' 12-POINT BOX + "SUPERRENCHES"
Selected Alloy Steel

DOUBLE OFFSET PATTERNS

No.	Nominal Openings	For Amer. Std. HEAVY Nuts (U.S.S.); Size Bolts	For Amer. Std. Hex Head Cap Screws; Diam. Screws	For Amer. Std. LIGHT Nuts (S.A.E.); Size Bolts	For Amer. Std. REGULAR Nuts; Size Bolts	Extreme Length, Approx.	Weight Each, Lbs.	No.
FOR HEAVY SERVICE—LONG PATTERN—Round Handle								
8040B	1 7/16 & 1 1/2	7/8	1 1/8	1	21	6.3	8040B	
8041	1 7/16 & 1 5/8	7/8 & 1	1 1/8 & 1 1/4	1 & 1 1/8	23	5.7	8041	
8742B	1 1/2 & 1 11/16	1 1/8 & 1 1/4	1 1/4 & 1 3/8	1 & 1 1/8	23	5.8	8742B	
8045	1 13/16 & 2	1 1/8 & 1 1/4	.....	.....	25	8.5	8045	
8049	2 3/16 & 2 3/8	1 3/8 & 1 1/2	.....	1 1/2	.....	27	10.2	8049
8053	2 9/16 & 2 3/4	1 5/8 & 1 3/4	.....	.....	.....	30	14.7	8053
SHORT PATTERN—Different Opening in Each Head								
9723	3/8 & 7/16	.....	3/16 & 1/4	1/4	1/4	4 1/2	.1	9723
9725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4 & 5/16	5	.19	9725
9725A	7/16 & 9/16	.....	1/4 & 3/8	1/4 & 3/8	1/4 & 5/16	5 1/2	.22	9725A
9725B	1/2 & 9/16	1/4	5/16 & 3/8	5/16 & 3/8	5/16	5 1/2	.22	9725B
9025	1/2 & 19/32	1/4 & 5/16	5/16	5/16	5/16	5 1/2	.22	9025
9727	9/16 & 5/8	.....	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6	.29	9727

12-POINT BOX + "SUPERRENCH" SETS
Selected Alloy Steel

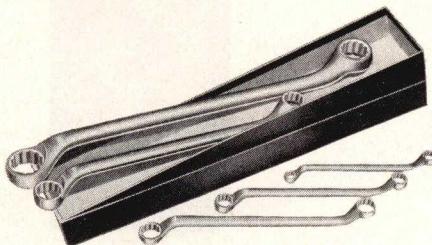


SET No. 9703

In Leatherette Roll
In Cardboard Box
Weight, .44 Lb.

CONTENTS

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.)	Amer. Std. Hex Head Cap Screws	Amer. Std. LIGHT Nuts (S.A.E.)	Amer. Std. REGULAR Nuts	Length Approx.
9723	3/8 & 7/16	.....	3/16 & 1/4	1/4	1/4	4-1/2
9725	7/16 & 1/2	1/4	1/4 & 5/16	1/4 & 5/16	1/4	5-1/2
9727	9/16 & 5/8	.....	3/8 & 7/16	3/8 & 7/16	5/16 & 3/8	6



SET No. 8005A

In Cardboard Box
Weight, 10.6 Lbs.



SET No. 8006

In Leatherette Roll
In Cardboard Box
Weight, 3.4 Lbs.

CONTENTS

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.)	Amer. Std. Hex Head Cap Screws	Amer. Std. LIGHT Nuts (S.A.E.)	Length Approx.
8025	1/2 & 19/32	1/4 & 5/16	5/16	5/16	8-3/4
8029	11/16 & 25/32	3, 8 & 7/16	.....	11	.....
8033A	7/8 & 15/16	1/2 & 9/16	5/8	9/16 & 5/8	13-1/2
8037	1-1/16 & 1-1/4	5/8 & 3/4	.....	3/4 & 7/8	17
8041	1-7/16 & 1-5/8	7/8 & 1	.....	1 & 1-1/8	23

No.	Nominal Openings	Amer. Std. HEAVY Nuts (U.S.S.)	Amer. Std. Hex Head Cap Screws	Amer. Std. LIGHT Nuts (S.A.E.)	Amer. Std. REGULAR Nuts	Length Approx.
8723	3/8 & 7/16	.....	3/16 & 1/4	1/4	1/4	7-3/4
8025	1/2 & 19/32	1/4 & 5/16	5/16	5/16	5/16	8-3/4
8727	9/16 & 5/8	.....	3, 8 & 7/16	3/8 & 7/16	5/16 & 3/8	9-3/4
8029	11/16 & 25/32	3/8 & 7/16	.....	.....	.....	11
8731A	3/4 & 7/8	1/2	1/2 & 5/8	1/2 & 9/16	7/16 & 9/16	12-1/2
8033C	15/16 & 1	9/16	.....	3/4 & 5/8	5/8	14-1/2

♦ REGISTERED TRADE MARK

WILLIAMS'
"MULTISOCKET" WRENCH
EIGHT-IN-ONE



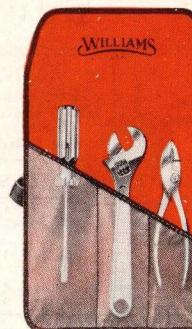
No. 1999
8 Different 12-Point Openings
Small Head; 7/16, 1/2, 9/16, 19/32"
Large Head; 5/8, 11/16, 3/4, 7/8"
Weight, 1.2 Lbs.

The openings grip hex nuts on six sides; no slipping or rounding of the nuts' corners.

Swivel heads, with index spring to retain working opening in position for use, permit handle to be operated at practically any angle desired. Can be used as a socket wrench.

The entire wrench is drop-forged, heat-treated and finished in zinc plate. Length, 9 inches.

WILLIAMS'
GENERAL PURPOSE UTILITY SET

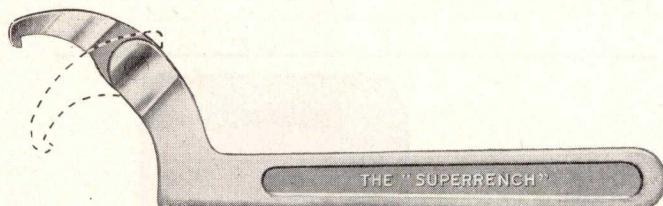


SET No. APS-3
Complete in Leatherette Roll or Cardboard Box
Total Weight, 1.3 Lbs.

An ideal set for numerous small jobs around home and office. Also for general automobile use. Convenient size for glove compartment.

Contains one each No. 24 4" Screw Driver with plastic handle, 8 in. "Superjustable" Wrench and No. 6 6" Combination Slip-joint Pliers.

WILLIAMS' ADJUSTABLE HOOK SPANNERS
Selected Alloy Steel



These Spanners are drop-forged from Selected Alloy Steel, heat-treated and chrome-plated, face of jaw and raised part of handle buffed bright.

Sold individually, or in Set No. 1400. Especially serviceable on Spindle Bearings of Lathes, Milling and Grinding Machines, Rear Axle Shaft and Wheel Bearings, Exhaust Manifold Gland Nuts, Differential Pinion Gear, Water-Pump Packing Nuts, etc. Also, for adjusting collars and slotted rings used on many types of automatic machines.



SET No. 1400
In Leatherette Roll
In Cardboard Box
Weight, 1.8 Lbs.

No.	Capacity for Circles, Diameter	Extreme Length, Approx.	Thickness		Depth Hook	Weight Each, Lbs.	No.
			Handle	Hook			
1471	3/4 to 2	6 3/8	1/4	11/32	1/8	.28	1471
1472	1 1/4 to 3	8 1/8	9/32	13/32	5/32	.54	1472
1474	2 to 4 3/4	11 3/8	5/16	15/32	3/16	.94	1474

DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' SPECIAL ♦ "SUPERRENCHES"
Selected Alloy Steel

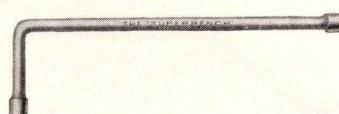
FOR FORD CARS AND TRUCKS

"SUPERRENCH"

Selected Alloy Steel

For Ford V-8 60 H.P.

Connecting Rods



No. S-231

Length, 11-1/2" Offset, 3"

Weight, 1.1 Lbs.

Heat-treated and Chrome-plated

Spin nuts till engaged (short arm for lever); reverse wrench and tighten (long arm for lever).

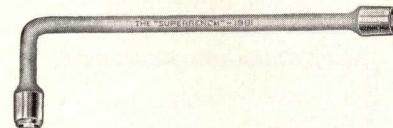
6-Point Openings, 7/16 and 7/16". Special thin design sockets to handle clearance problem on all Ford V-8 60 H.P. motor, 1937-'40.

"SUPERRENCH"

Selected Alloy Steel

For Ford V-8, 6 and Mercury

Connecting Rods



No. 1981-A

Length, 11-1/2" Offset, 3"

Weight, .84 Lb.

Heat-treated and Chrome-plated

Spin nuts till engaged (short arm for lever); reverse wrench and tighten (long arm for lever).

6-Point Openings, 9/16 and 9/16". Special thin design sockets to handle clearance problem on all Ford 6, all Ford V-8 (except 60 H.P.) and all Mercury connecting rod nuts. Very handy for manifold nuts and valve cap covers. Also useful for the connecting rod nuts on other automobiles.

"SUPERRENCH"

Selected Alloy Steel

**For Adjusting
Ford Mechanical Brakes**



No. 1984-X

7/16 and 1 1/2" 8-Point Openings

Length, 11-1/4" Thickness Heads, 7/16"

Weight, .53 Lb.

Heat-treated and Chrome-plated

The only wrench required for adjusting brakes on Ford "A", "B", all V-8, 1932-'38; also Ford "AA" and all V-8 trucks, 1932-'38.

"SUPERRENCH"

Selected Alloy Steel

**For Ford and Mercury
Crankcase Drain Plugs**



No. 1966-A

2" 12-Point Opening

Length, 11"

Weight, .96 Lb.

Heat-treated and Chrome-plated

Required for drain plug service on all 1939-'48 Ford V-8 and Mercury cars.

♦ REGISTERED TRADE MARK

For other Special "Superrenches", see following pages.

DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' SPECIAL ♦ "SUPERRENCHES"

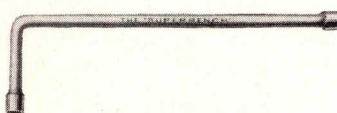
Selected Alloy Steel

FOR FORD CARS AND TRUCKS

"SUPERRENCH"

Selected Alloy Steel

For Ford V-8 60 H.P.
Main Bearings



No. S-243

21/32 and 21/32" 6-Point Openings
Length, 11-1/2" Offset, 3"
Weight, .87 Lb.

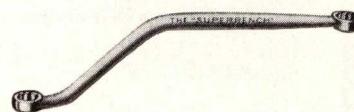
Heat-treated and Chrome-plated

Special thin design sockets to handle clearance problem on all main bearing screws Ford V-8 60 H.P., 1937-'40. Also connecting rod nuts on all Ford models "A", "B" and "T".

"SUPERRENCH"

Selected Alloy Steel

For Ford 6, V-8, Mercury
and Lincoln Distributors



No. SV-244

1/2 and 1/2" 12-Point Openings
Length, 9" Offset, 2-1/4"
Weight, .37 Lb.

Heat-treated and Chrome-plated

Specially offset to clear fan-belt. A big time saver in servicing distributors on Ford 6, 1941-'47; V-8, 1937-'48; Mercury, 1939-'48; Lincoln Zephyr, 1937-'42; and Lincoln, 1946-'48. Also a very useful tool on all Ford V-8 fuel pumps and carburetors.

WILLIAMS'
FORD CRANK RATCHET SOCKET
Selected Alloy Steel

For
All Ford Cars and Trucks 1928-'42



No. V-132

1-3/8" 6-Point Opening
Weight, .28 Lb.

Heat-treated and Cadmium-plated

Services lower fan-pulley nut, necessary in dropping oil pan, without removing radiator. Designed for use with regular Ford starting crank.

For all Ford cars and trucks 1928-'37, all Ford trucks 1938-'42, 1946. Cut away for clearance.

WILLIAMS'
STANDARD "SUPERSOCKETS"
Selected Alloy Steel

For
Ford Cars and Trucks



*No. SF-618

9/16" 6-Point Opng. 9/16" 12-Point Opng.
1/2" Square Drive
Weight, .13 Lb.

Heat-treated and Chrome-plated



*No. SF-1218

Use with Torque Wrench required on
models having "Marsden" self-locking nuts.
For all Ford 6, Ford-Mercury V-8, 85 H.P., 90
H.P. and 100 H.P. Connecting Rods.

*Not guaranteed because of extra thin walls.

WILLIAMS' "SUPERRENCHES" AND PLIERS
Selected Alloy Steel

FOR AUTOMOTIVE BRAKE SERVICE

"SUPERRENCH"
Selected Alloy Steel

For Eccentric Adjustments



No. 1983

Openings 3/16 & 1/4", Length 9", Thick. Hds. 1/4"
 Weight, .15 Lb.

Heat-treated and Chrome-plated

For Eccentric Cam, Lockheed, Hydraulic and
 Bendix mechanical brakes.

"SUPERRENCH"
Selected Alloy Steel

For
 Star Nut, Etc.—Bendix Hydraulic



No. 1998-B

Blade Tips, 5/64 x 15/32"
 Length, 8"
 Weight, .19 Lb.

Heat-treated and Chrome-plated

Specially offset to service Star Nut Eccentric,
 all Bendix Hydraulic.

"SUPERRENCH"
Selected Alloy Steel

For
 Slotted Anchor Pins, Etc.



No. 1997

Length, 6". Blade Tips, 1/16 x 13/32"
 Weight, .18 Lb.

Heat-treated and Chrome-plated

For slotted anchor pins, drag links, steering
 post and other jobs where regular screw drivers
 cannot be used. Also excellent as a glazier's tool.

◆ REGISTERED TRADE MARK

WILLIAMS'
LOCK RING PLIERS
Selected Alloy Steel

For
 Snap Lock Rings



No. 1515

Length, 8"
 Weight, .33 Lb.

Gun metal blue handles, nose polished
 Heat-treated

Pliers are designed for spreading "Horse Shoe" snap lock rings on automotive brakes, transmissions, differentials, pulleys, etc.

WILLIAMS'
BRAKE PLIERS
Selected Alloy Steel

For
 Brake-Shoe Springs



No. 1517

Length, 13"
 Weight, .75 Lb.

Gray satin finish; head faces polished

Heat-treated

For inserting and removing springs (internal).
 For use only on passenger cars and light and medium trucks excepting Ford "A".

For other Special "Superrenches", see following page.

DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' SPECIAL ♦ "SUPERRENCHES"

Selected Alloy Steel

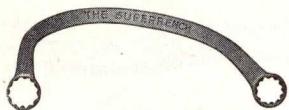
FOR STARTER AND MANIFOLD

"SUPERRENCH"

Selected Alloy Steel

For

Starter and Manifold Nuts



No. 1960

9/16 and 5/8" 12-Point Openings—Length, 7"

Weight, .21 Lb.

Heat-treated and Chrome-plated

For starter and manifold nuts, all models Chrysler and Dodge; DeSoto and Plymouth. Also very useful for starters and manifolds on many other passenger automobiles.

"SUPERRENCH"

Selected Alloy Steel

For

Chevrolet Starter Nuts



No. 1961

5/8 and 3/4" 12-Point Openings

Length, 7-1/2"

Weight, .34 Lb.

Heat-treated and Chrome-plated

For starter nuts, all Chevrolet models, 1930-'48. Also very useful for starters on many other passenger automobiles.

WILLIAMS' SPECIAL "SUPERSOCKET"

Selected Alloy Steel

For Cadillac Connecting Rod



No. SC-614

1/2" Square Drive

7/16" 6-Point Opening

3-1/8" Long

Weight, .30 Lb.

The Cadillac Connecting Rod Nut requires an unusually strong socket for servicing. Made from selected alloy steel, heat-treated and chrome-plated. Services all model Cadillacs, 1937-'48.

WILLIAMS' STUD REMOVER

Selected Alloy Steel



No. S-60B

1/2" Square Drive

Stud Capacity

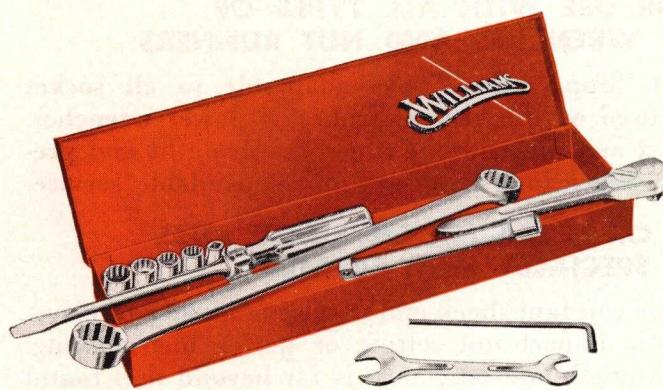
1/4" to 3/4" Diameter

Weight, .52 Lb.

This Stud Remover is designed for use with 1/2" square drive handles and attachments. It is equally efficient for removing or setting studs.

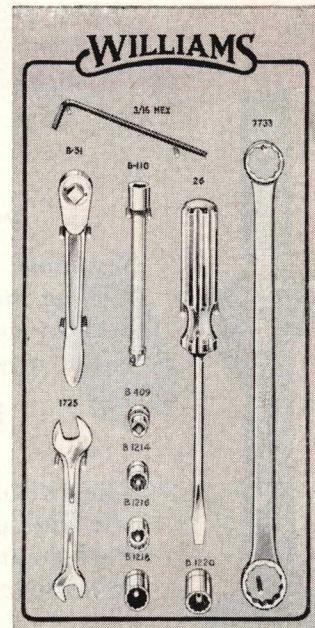
Eccentrically mounted roller with deep milled edge provides a non-slipping, gripping surface which is non-burring. Stud capacity, 1/4" to 3/4" diameter. Made from selected alloy steel, heat-treated and chrome-plated.

WILLIAMS' AUTOMATIC TRANSMISSION SETS



No. ATS-1

Steel Case, 1-3/8 x 3-1/2 x 14-1/4"
Total Weight, 3.8 lbs.



No. ATS-2

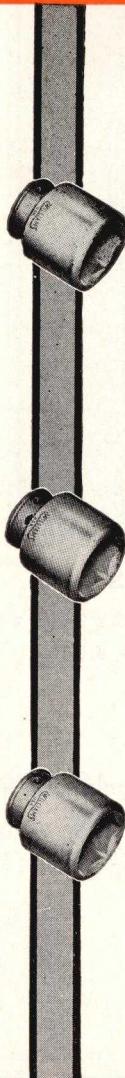
Plywood Panel, 1/2 x 9-1/2 x 19"
Total Weight, 4.5 lbs.

These sets were designed to facilitate oil-change work on automatic transmissions such as Hydra-Matic, Dyna-Flo, Power Glide, Ultramatic, Fluid Drive and Studebaker Automatic transmissions. Set may be purchased in metal case or plywood panel as illustrated.

Contents — either set

Quan.	No.	Description	Use
1	B-409	Socket—9/32" Square Opening.....	Torque Converter Drain Plug (Dynaflow)
1	B-1214	Socket—7/16" 12 Pt. Opening.....	Hydramatic Fluid Coupling Drain Plug
1	B-1216	Socket—1/2" 12 Pt. Opening.....	Flywheel Cover Bolts
1	B-1218	Socket—9/16" 12 Pt. Opening.....	Flywheel Cover Bolts
1	B-1220	Socket—5/8" 12 Pt. Opening.....	For Hex Head Converter Drain Plug (Studebaker)
1	B-110	Extension.....	3/8" male for (Power Glide) Housing Plug
1	B-51	Reversible Ratchet.....	3/8" male for (Power Glide) Housing Plug
1	26	6" Round Blade Screw Driver.....	For Rotating Flywheels
1	7733	15° Offset Box Wrench—7/8 & 1" Op'ngs	For Dynaflow Transmission Oil Pan Plug
1	A1725	Open End Wrench—7/16 & 1/2" Op'ngs	For Transmission Pipe Plug
1	3/16"	Hexagon Key Wrench—4-1/2" long	For old type Fluid Coupling Drain Plug (Hydramatic)

IMPACT **"SUPERSOCKETS"**



FOR USE WITH ALL TYPES OF POWER WRENCHES AND NUT RUNNERS

Williams' Impact "Supersockets" are adaptable to all socket locking methods used on the various makes of power wrenches, both of the impact and nut running types. Accurate fit and precision machining assure long life, safe and dependable service.

MADE OF EXTRA-TOUGH ALLOY STEEL SPECIALLY HEAT-TREATED

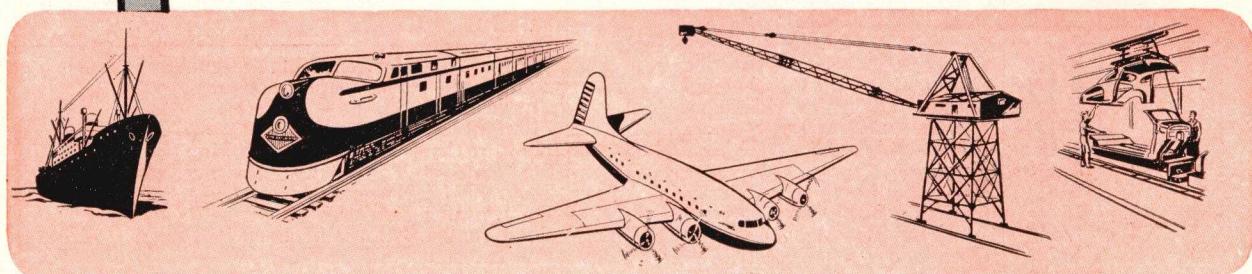
They withstand the constant shock and pounding involved in electric and pneumatic impact nut setting or power nut running. Performance in strength and toughness is far beyond that found in ordinary power sockets.

ALSO CAN BE USED WITH WILLIAMS' HAND SOCKET DRIVERS

Williams' Impact "Supersockets" will fit and can be used on Williams' Hand Socket Drivers where corresponding drive sizes are available. This use is recommended for applications where sockets of extra strength and toughness seem to be indicated.

7 SQUARE DRIVE SIZES OVER 300 SOCKETS AND ACCESSORIES

Impact "Supersockets" are available with hex openings from $3/16"$ to $2-3/4"$ and 8-point openings from $5/16"$ to $1-1/4"$. A wide selection is offered in standard and bolt clearance lengths for all types of power wrench work found in manufacturing plants, shipyards, locomotive and railroad shops, automotive service, radio, television and similar assembly work, etc.

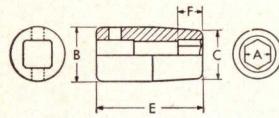


WILLIAMS' IMPACT ♦ "SUPERSOCKETS"

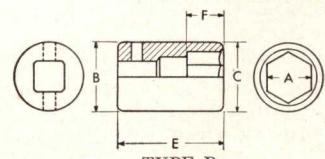
"O" SERIES — STANDARD LENGTH

1/4" SQUARE DRIVE

(Male Square .250-.252 Female Square .253-.255)



TYPE A



TYPE B

Nominal Opening	No.	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
5/16	0-606				†2 & 3	A	.194	.440	.362	7/8	.197
7/32	0-607					A	.226	.440	.409	7/8	.213
1/4	0-608				†4	B	.257	.440	.440	7/8	.228
9/32	0-609					A	.289	.503	.471	7/8	.244
5/16	0-610		1/8	1/8	†5 & 6	B	.321	.503	.503	7/8	.260
11/32	0-611				†8	B	.353	.503	.503	7/8	.291
3/8	0-612		3/16	1/4	†10	B	.384	.565	.565	7/8	.322
7/16	0-614		1/4	1/4	1/4 & †12	B	.447	.628	.628	7/8	.322

STANDARD LENGTH — SINGLE HEXAGON OPENINGS

Finish — Rust Resistant

3/16	0-606				†2 & 3	A	.194	.440	.362	7/8	.197
7/32	0-607					A	.226	.440	.409	7/8	.213
1/4	0-608				†4	B	.257	.440	.440	7/8	.228
9/32	0-609					A	.289	.503	.471	7/8	.244
5/16	0-610		1/8	1/8	†5 & 6	B	.321	.503	.503	7/8	.260
11/32	0-611				†8	B	.353	.503	.503	7/8	.291
3/8	0-612		3/16	1/4	†10	B	.384	.565	.565	7/8	.322
7/16	0-614		1/4	1/4	1/4 & †12	B	.447	.628	.628	7/8	.322

STANDARD LENGTH — DOUBLE SQUARE (8 PT.) OPENING FOR SQUARE NUTS

Finish — Rust Resistant

5/16	0-810	1/8			†5 & 6	B	.321	.534	.534	7/8	.260
3/8	0-812				†10	B	.384	.628	.628	7/8	.322
7/16	0-814				1/4	B	.447	.815	.815	7/8	.322

† Amer. Std. Machine-Screw and Stove-Bolt Nuts.

♦ REGISTERED TRADE MARK

DROP-FORGINGS AND

WILLIAMS

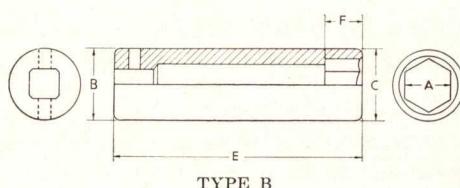
DROP-FORGED TOOLS

WILLIAMS' IMPACT + "SUPER SOCKETS"

"O" SERIES — BOLT CLEARANCE LENGTH

1/4" SQUARE DRIVE

(Male Square .250-.252 Female Square .253-.255)



Nominal Opening	No.	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
1/4	10-608	.....	.....	.....	†4	B	.257	.440	.440	2	.228
5/16	10-610	1/8	1/8	.....	†5 & 6	B	.321	.503	.503	2	.260
3/8	10-612	.....	3/16	.....	†10	B	.384	.565	.565	2	.322

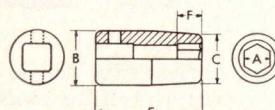
† Amer. Std. Machine-Screw and Stove-Bolt Nuts.

WILLIAMS' IMPACT + "SUPER SOCKETS"

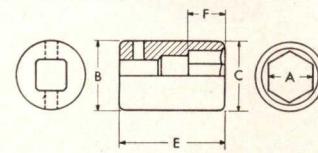
"O" SERIES — STANDARD LENGTH

1/4" SQUARE DRIVE

(Male Square .250-.252 Female Square .253-.255)



TYPE A



TYPE B

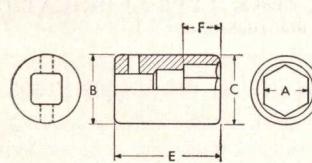
Nominal Opening	No.	Amer. Std. Hex Head Tapping Screw	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
			Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGILR Nut Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
3/16	20-606	3, 4, 5	.....	.....	.....	.....	A	.191	.440	.315	7/8	.075
1/4	20-608	6, 7, 8	.....	.....	.....	.....	B	.254	.440	.440	7/8	.125
5/16	20-610	10 & 12	.....	.....	.....	.....	B	.316	.503	.503	7/8	.135
3/8	20-612	14 & 1/4	.....	.....	.....	.....	B	.379	.565	.565	7/8	.205

STANDARD LENGTH—SINGLE HEXAGON OPENINGS FOR HARDENED AND SELF TAPPING SCREWS
Finish—Copper colored for positive identification

3/16	20-606	3, 4, 5	.....	.....	.....	.....	A	.191	.440	.315	7/8	.075
1/4	20-608	6, 7, 8	.....	.....	.....	.....	B	.254	.440	.440	7/8	.125
5/16	20-610	10 & 12	.....	.....	.....	.....	B	.316	.503	.503	7/8	.135
3/8	20-612	14 & 1/4	.....	.....	.....	.....	B	.379	.565	.565	7/8	.205

With Carbide Inserts for Self Tapping Screws

This line of Impact "Supersockets" has been developed for driving case-hardened, self-tapping screws with power tools of all types. They may also be used with hand drivers.



Due to the hard case found on screws of the self-tapping type, even the best alloy steels, properly hardened, do not offer sufficient life. The screw drive opening in these sockets is formed of solid Carbide which is permanently inserted into a hardened steel blank. Actual life due to the Carbide surfaces which drive the screw is at least ten times that of all steel sockets.

Sockets in table below fit Hex, Hex Washer and Oval Hex Washer Heads. Finish is satin nickel. See Page 67 for sizes in "2" Series.

Nominal Opening	No.	Amer. Std. Hex Head Tapping Screw	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
			Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. Machine Screw Hex Nut		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
1/4	20-608C	6, 7, 8	.....	.....	.....	.....	B	.258	.502	.502	7/8	.115
5/16	20-610C	10 & 12	.....	.....	.....	.....	B	.321	.564	.564	7/8	.125
3/8	20-612C	14 & 1/4	.....	.....	.....	.....	B	.386	.627	.627	7/8	.195
7/16	20-614C	.....	.....	.....	.....	.....	B	.450	.751	.751	7/8	.244

**STANDARD LENGTH — SINGLE HEXAGON OPENINGS WITH CARBIDE INSERTS
FOR SELF TAPPING SCREWS**
Fin'sh—Satin Nickel Plate for positive identification

1/4	20-608C	6, 7, 8	.....	.....	.....	.....	B	.258	.502	.502	7/8	.115
5/16	20-610C	10 & 12	.....	.....	.....	.....	B	.321	.564	.564	7/8	.125
3/8	20-612C	14 & 1/4	.....	.....	.....	.....	B	.386	.627	.627	7/8	.195
7/16	20-614C	.....	.....	.....	.....	.....	B	.450	.751	.751	7/8	.244

♦ REGISTERED TRADE MARK

DROP-FORGINGS AND

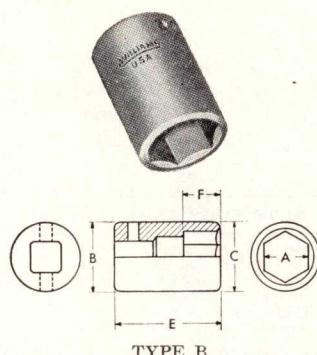
WILLIAMS DROP-FORGED TOOLS

WILLIAMS' IMPACT ♦ "SUPER SOCKETS"

"O" SERIES — STANDARD LENGTH

1/4" SQUARE DRIVE

(Male Square .250-.252 Female Square .253-.255)



Nominal Opening	No.	Fitting Type and Number	Type	MAXIMUM DIMENSIONS				
				Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
5/16	20-610	Fits GMC No. 110347 Type C Straight Fitting	B	.316	.503	.503	7/8	.135

STANDARD LENGTH—SINGLE HEXAGON OPENING FOR ZERK TYPE LUBRICATION FITTINGS
Finish—Copper colored for positive identification

5/16	20-610	Fits GMC No. 110347 Type C Straight Fitting	B	.316	.503	.503	7/8	.135
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"O" SERIES ACCESSORIES

EXTENSIONS



Male squares fitted with spring plunger.

No.	Length	Square Male	Square Female
0-102	2	1/4	1/4
0-106	6	1/4	1/4

HEXAGON—SQUARE SHANKS



Male squares fitted with spring plunger.

No.	Length	Square Male	Hex Male
0-02	2	1/4	1/4
0-04	4	1/4	1/4

WILLIAMS' IMPACT ♦ "SUPERSOCKETS"

"O" SERIES MAGNETIC ACCESSORIES

1/4" SQUARE DRIVE

(Male Square .250-.252 Female Square .253-.255)

MAGNETIC ADAPTER



Patents
Pending

MAGNETIC HEXAGON-SQUARE SHANK



These tools are designed for use *only* with Williams' Impact "Supersockets" for Hardened and Self-Tapping Screws as listed below.

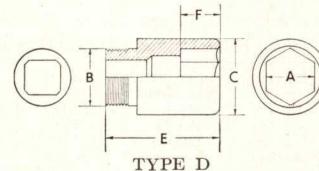
A telescopic magnetic device passes within an assembled socket and contacts either the screw head or nut, retaining same within the socket nut opening. The magnet, imbedded in the drive member, is spring loaded to overcome air gaps and transmits its magnetism through a hardened steel tip to the screw or nut.

Threaded connection is "left hand" and provides a positive fastening of the socket to the shank or adapter.

No.	Length	Square Male	Square Female
BO-0	2	1/4	1/4

No.	Length	Square Male	Hex Male
BO-02	2-1/2	1/4	1/4

"O" SERIES — STANDARD LENGTH



FOR USE WITH WILLIAMS' MAGNETIC IMPACT ACCESSORIES

Designed for use *only* with Williams' Magnetic Adapter No. BO-0 or Hexagon-Square Shank No. BO-02 to drive Hardened or Self-Tapping Screws widely used in assembly operations.

Drive end employs a male threaded portion for registration with a "left hand" Locking Nut on the drive member. The drive member contains a magnetic device to hold a screw head or nut within the socket nut opening.

Nominal Opening	No.	Amer. Std. Hex Head Tapping Screw	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
			Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGLR Nut Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
1/4	B20-608	6, 7, 8	.....	.....	.....	.....	D	.254	.437	.440	7/8	.125

STANDARD LENGTH—SINGLE HEXAGON OPENINGS FOR HARDENED AND SELF TAPPING SCREWS
Finish—Rust Resistant

1/4	B20-608	6, 7, 8	.....	.....	.....	.....	D	.254	.437	.440	7/8	.125
9/32	B20-609	.....	.....	.....	.....	.....	D	.285	.437	.471	7/8	.125
5/16	B20-610	10 & 12	.....	.....	.....	.....	D	.316	.437	.503	7/8	.135
3/8	B20-612	14 & 1/4	.....	.....	.....	.....	D	.379	.437	.565	7/8	.205

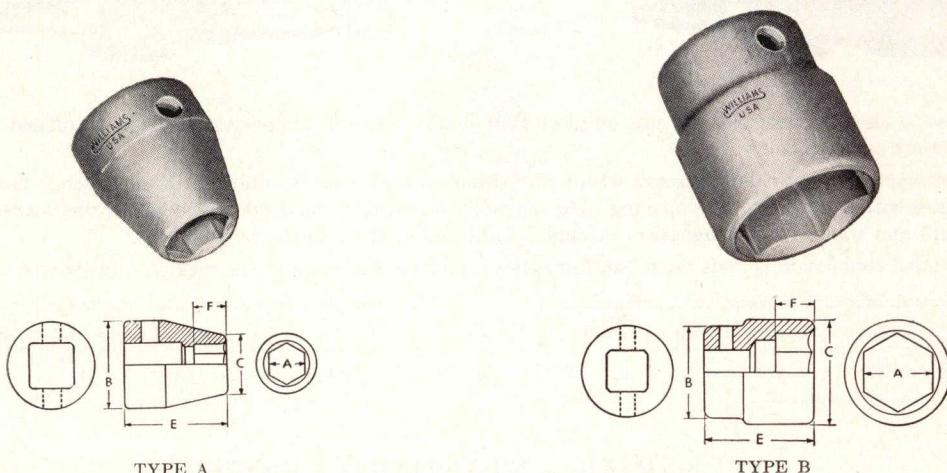
♦ REGISTERED TRADE MARK

WILLIAMS' IMPACT + "SUPER SOCKETS"

"2" SERIES — STANDARD LENGTH

3/8" SQUARE DRIVE

(Male Square .376-.378 Female Square .379-.381)



Nominal Opening	No.	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam.	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
5/16	2-610	1/8	1/8	.....	†5 & 6	A	.321	.753	.503	7/8	.291
11/32	2-611	.....	.....	.....	†8	A	.353	.753	.534	7/8	.291
3/8	2-612	.....	3/16	.....	†10	A	.384	.753	.565	7/8	.291
7/16	2-614	.....	1/4	1/4	1/4 & †12	A	.447	.753	.653	7/8	.291
1/2	2-616	1/4	5/16	5/16	.....	B	.510	.753	.753	15/16	.322
9/16	2-618	.....	3/8	3/8	5/16	A	.573	.878	.815	1	.385
19/32	2-619	5/16	.....	.....	.....	A	.605	.878	.841	1	.385
5/8	2-620	.....	7/16	7/16	3/8	B	.636	.878	.893	1	.416
11/16	2-622	3/8	.....	.....	.....	B	.701	.878	.971	1-1/8	.447
* 3/4	2-624	.....	1/2	1/2	7/16	B	.763	.878	1.065	1-1/8	.447

STANDARD LENGTH — SINGLE HEXAGON OPENINGS
Finish — Rust Resistant

5/16	2-610	1/8	1/8	.....	†5 & 6	A	.321	.753	.503	7/8	.291
11/32	2-611	.....	.....	.....	†8	A	.353	.753	.534	7/8	.291
3/8	2-612	.....	3/16	.....	†10	A	.384	.753	.565	7/8	.291
7/16	2-614	.....	1/4	1/4	1/4 & †12	A	.447	.753	.653	7/8	.291
1/2	2-616	1/4	5/16	5/16	.....	B	.510	.753	.753	15/16	.322
9/16	2-618	.....	3/8	3/8	5/16	A	.573	.878	.815	1	.385
19/32	2-619	5/16	.....	.....	.....	A	.605	.878	.841	1	.385
5/8	2-620	.....	7/16	7/16	3/8	B	.636	.878	.893	1	.416
11/16	2-622	3/8	.....	.....	.....	B	.701	.878	.971	1-1/8	.447
* 3/4	2-624	.....	1/2	1/2	7/16	B	.763	.878	1.065	1-1/8	.447

STANDARD LENGTH — ALTERNATE DESIGN — SINGLE HEXAGON OPENINGS
Finish — Rust Resistant

3/8	A2-612	.....	3/16	.....	†10	A	.384	.690	.555	7/8	.291
7/16	A2-614	.....	1/4	1/4	1/4 & †12	A	.447	.690	.636	7/8	.291
1/2	A2-616	1/4	5/16	5/16	.....	B	.510	.716	.716	7/8	.291
9/16	A2-618	.....	3/8	3/8	5/16	B	.573	.794	.794	7/8	.291

† Amer. Std. Machine-Screw and Stove-Bolt Nuts.

* DISCONTINUED: will supply until stock is exhausted.

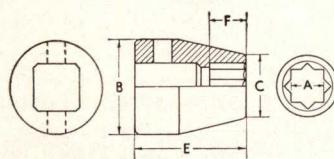
◆ REGISTERED TRADE MARK

WILLIAMS' IMPACT + "SUPER SOCKETS"

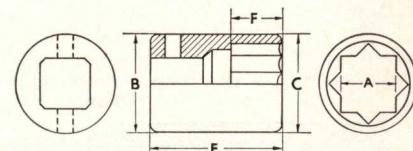
"2" SERIES — STANDARD LENGTH

3/8" SQUARE DRIVE

(Male Square .376-.378 Female Square .379-.381)



TYPE A



TYPE B

Nominal Opening	No.	FOR SQUARE NUTS				Type	MAXIMUM DIMENSIONS				
		Amer. Std. Hex Head Nut (U.S.S.) Size Bolt	Amer. Std. Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
5/16	2-810	1/8	.....	.....	†5 & 6	A	.321	.690	.565	7/8	.291
3/8	2-812	.....	.....	.....	†10	A	.384	.690	.650	7/8	.291
7/16	2-814	.....	.....	1/4	1/4 & †12	B	.447	.753	.753	7/8	.291
1/2	2-816	1/4	.....	5/16	.....	B	.510	.878	.878	7/8	.322
9/16	2-818	.....	.....	3/8	5/16	B	.573	1.003	1.003	1	.385
5/8	2-820	.....	.....	7/16	3/8	B	.636	1.128	1.128	1-1/8	.416

† Amer. Std. Machine-Screw and Stove-Bolt Nuts.

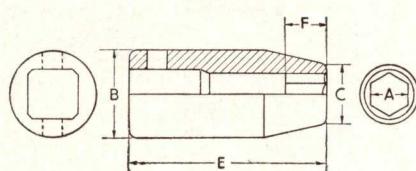
▲ REGISTERED TRADE MARK

WILLIAMS' IMPACT ♦ "SUPER SOCKETS"

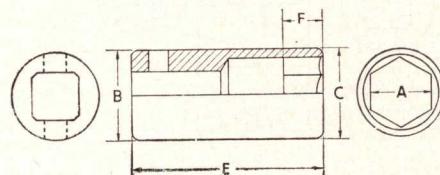
"2" SERIES — BOLT CLEARANCE LENGTH

3/8" SQUARE DRIVE

(Male Square .376-.378 Female Square .379-.381)



TYPE A



TYPE B

Nominal Opening	No.	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
5/16	12-610	1/8	1/8	.....	†5 & 6	A	.321	.690	.477	1-1/2	.291
3/8	12-612	.....	3/16	.....	†10	A	.384	.690	.555	1-1/2	.291
7/16	12-614	.....	1/4	1/4	1/4 & †12	A	.447	.690	.636	1-1/2	.291
1/2	12-616	1/4	5/16	5/16	.....	B	.510	.716	.716	1-1/2	.322
9/16	12-618	.....	3/8	3/8	5/16	B	.573	.794	.794	1-1/2	.385
5/8	12-620	.....	7/16	7/16	3/8	B	.636	.878	.878	1-1/2	.416

BOLT CLEARANCE LENGTH — SINGLE HEXAGON OPENINGS

Finish — Rust Resistant

5/16	12-610	1/8	1/8	.....	†5 & 6	A	.321	.690	.477	1-1/2	.291
3/8	12-612	.....	3/16	.....	†10	A	.384	.690	.555	1-1/2	.291
7/16	12-614	.....	1/4	1/4	1/4 & †12	A	.447	.690	.636	1-1/2	.291
1/2	12-616	1/4	5/16	5/16	.....	B	.510	.716	.716	1-1/2	.322
9/16	12-618	.....	3/8	3/8	5/16	B	.573	.794	.794	1-1/2	.385
5/8	12-620	.....	7/16	7/16	3/8	B	.636	.878	.878	1-1/2	.416

† Amer. Std. Machine-Screw and Stove-Bolt Nuts.

♦ REGISTERED TRADE MARK

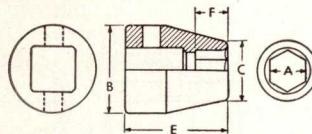
1-52

WILLIAMS' IMPACT + "SUPERSOCKETS"

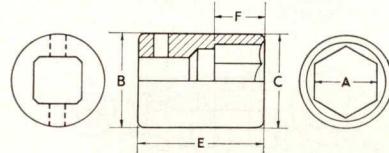
"2" SERIES — STANDARD LENGTH

3/8" SQUARE DRIVE

(Male Square .376-.378 Female Square .379-.381)



TYPE A



TYPE B

Nominal Opening	No.	Amer. Std. Hex Head Tapping Screw	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
			Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Cap Screw	Amer. Std. REGULAR Nut (S.A.E.) Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
5/16	22-610	10 & 12	.....	.....	.....	.....	A	.316	.753	.503	7/8	.135
3/8	22-612	14 & 1/4	.....	.....	.....	.....	A	.379	.753	.567	7/8	.205
7/16	22-614	.....	.....	.....	.....	.....	A	.441	.753	.659	15/16	.245
1/2	22-616	5/16	.....	.....	.....	.....	B	.504	.753	.753	15/16	.245
9/16	22-618	3/8	.....	.....	.....	.....	A	.566	.878	.815	1	.310

STANDARD LENGTH—SINGLE HEXAGON OPENINGS FOR HARDENED AND SELF TAPPING SCREWS
Finish—Copper colored for positive identification

5/16	22-610	10 & 12	.....	.....	.....	.....	A	.316	.753	.503	7/8	.135
3/8	22-612	14 & 1/4	.....	.....	.....	.....	A	.379	.753	.567	7/8	.205
7/16	22-614	.....	.....	.....	.....	.....	A	.441	.753	.659	15/16	.245
1/2	22-616	5/16	.....	.....	.....	.....	B	.504	.753	.753	15/16	.245
9/16	22-618	3/8	.....	.....	.....	.....	A	.566	.878	.815	1	.310

**STANDARD LENGTH—SINGLE HEXAGON OPENINGS WITH CARBIDE INSERTS
FOR SELF TAPPING SCREWS—See Page 61 for description**
Finish—Satin Nickel Plate for positive identification

5/16	22-610C	10 & 12	.....	.....	.....	.....	A	.321	.752	.562	7/8	.125
3/8	22-612C	14 & 1/4	.....	.....	.....	.....	A	.386	.752	.632	7/8	.195
7/16	22-614C	.....	.....	.....	.....	.....	A	.450	.877	.763	15/16	.244
1/2	22-616C	5/16	.....	.....	.....	.....	A	.513	.877	.842	15/16	.239

STANDARD LENGTH—SINGLE HEXAGON OPENING FOR ZERK TYPE LUBRICATION FITTINGS
Finish—Copper colored for positive identification

5/16	22-610	GMC No. 110347—Type C Straight Fitting	A	.316	.753	.503	7/8	.135
7/16	22-614	{ GMC No. 119512—Type C Straight Fitting GMC No. 145433—Type C Special Taper Drive, Straight }	A	.441	.753	.659	15/16	.245

"2" SERIES ACCESSORIES

EXTENSIONS



Male squares fitted with spring plunger.

No.	Length	Square Male	Square Female
2-103	3	3/8	3/8
2-106	6	3/8	3/8

HEXAGON—SQUARE SHANKS



Male squares fitted with spring plunger.

No.	Length	Square Male	Hex Male
2-33	2-3/4	3/8	7/16
2-35	5	3/8	7/16

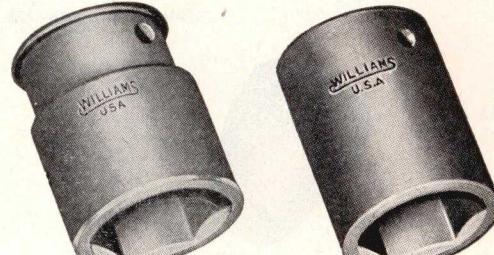
WILLIAMS' IMPACT + "SUPER SOCKETS"

"4" SERIES — STANDARD LENGTH

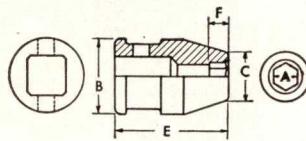
1/2" SQUARE DRIVE
(Male Square .501-.503 Female Square .504-.506)

IMPACT DESIGN

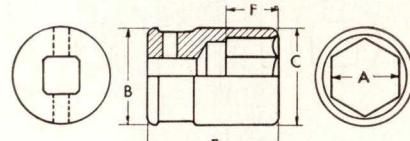
ALTERNATE DESIGN



IMPACT DESIGN ALTERNATE DESIGN



TYPE A



TYPE B

See Page 82 for Handy Sets

Nominal Opening	No.	Amer. Std. Hex Head Tapping Screw	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
			Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGLR Nut Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
3/8	4-612			3/16		†10	A	.384	1.003	.628	1-1/2	.291
7/16	4-614			1/4	1/4	1/4 & †12	A	.447	1.003	.706	1-1/2	.338
1/2	4-616			1/4	5/16	5/16	A	.510	1.065	.784	1-1/2	.385
9/16	4-618			3/8	3/8	5/16	A	.573	1.065	.879	1-1/2	.447
19/32	4-619			5/16			B	.605	1.065	.909	1-1/2	.447
5/8	4-620			7/16	7/16	3/8	A	.636	1.128	.956	1-1/2	.478
11/16	4-622			3/8			A	.701	1.128	1.034	1-1/2	.525
3/4	4-624			1/2	1/2	7/16	B	.763	1.128	1.128	1-1/2	.572
* 25/32	4-625			7/16			B	.794	1.128	1.143	1-1/2	.603
13/16	4-626			9/16		1/2	B	.826	1.128	1.190	1-1/2	.619
7/8	4-628			1/2	5/8	9/16	B	.888	1.128	1.315	1-5/8	.666
15/16	4-630				5/8		B	.952	1.315	1.378	1-3/4	.713
1	4-632			3/4		5/8	B	1.015	1.315	1.440	1-3/4	.760
1 1/16	4-634			5/8	3/4		B	1.080	1.315	1.518	2	.806
* 1 1/8	4-636				7/8		B	1.142	1.315	1.612	2	.853
1 3/16	4-638						B	1.205	1.315	1.690	2	.885
* 1 1/4	4-640			3/4		7/8	B	1.267	1.315	1.768	2	.947

‡ STANDARD LENGTH — ALTERNATE DESIGN — SINGLE HEXAGON OPENINGS
Finish — Rust Resistant

3/8	A4-612			3/16		†10	A	.384	.878	.608	1-1/2	.291
7/16	A4-614			1/4	1/4	1/4 & †12	A	.447	.878	.691	1-1/2	.338
1/2	A4-616			1/4	5/16	5/16	A	.510	.940	.776	1-1/2	.385
9/16	A4-618			3/8	3/8	5/16	A	.573	.940	.857	1-1/2	.447
19/32	A4-619			5/16			B	.605	.899	.899	1-1/2	.447
5/8	A4-620			7/16	7/16	3/8	B	.636	.944	.944	1-1/2	.478
11/16	A4-622			3/8			B	.701	1.025	1.025	1-1/2	.525
3/4	A4-624			1/2	1/2	7/16	B	.763	1.108	1.108	1-1/2	.572
13/16	A4-626			9/16		1/2	B	.826	1.190	1.190	1-1/2	.619
7/8	A4-628			1/2	5/8	9/16	B	.888	1.271	1.271	1-1/2	.666
15/16	A4-630				5/8		B	.952	1.357	1.357	1-3/4	.713
1	A4-632			3/4		5/8	B	1.015	1.440	1.440	1-3/4	.760
1 1/16	A4-634			5/8	3/4		B	1.080	1.525	1.525	2	.806

‡ These Sockets have straight walls with no band groove recess.

† Amer. Std. Machine-Screw and Stove-Bolt Nuts.

* DISCONTINUED: will supply until stock is exhausted.

For Retainer Pins and Neoprene Bands to fit Nos. 4-612 thru 4-640 see Page 83.

DROP-FORGINGS AND WILLIAMS DROP-FORGED TOOLS

WILLIAMS' IMPACT + "SUPER SOCKETS"

"4" SERIES — STANDARD LENGTH

1/2" SQUARE DRIVE

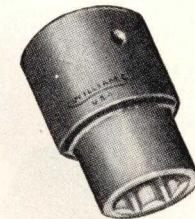
(Male Square .501-.503 Female Square .504-.506)



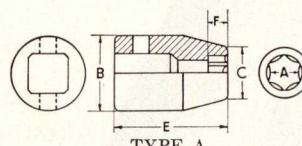
SURFACE DRIVE



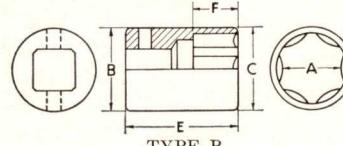
SURFACE DRIVE



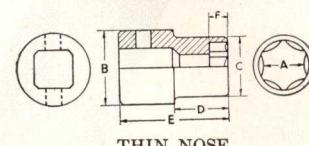
SURFACE DRIVE



TYPE A



TYPE B



THIN NOSE

Nominal Opening	No.	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS						
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Nose Length D	Length Overall E	Depth Op'nning F	
STANDARD LENGTH — SURFACE DRIVE — SINGLE HEXAGON OPENINGS													

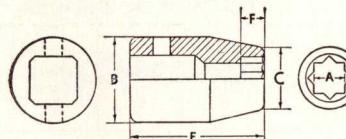
Finish — Rust Resistant

7/16	A4-614A	1/4	1/4	1/4 & $\frac{1}{12}$	A	.447	.878	.691	.....	1-1/2	.338
1/2	A4-616A	5/16	5/16	5/16	A	.510	.940	.776	.....	1-1/2	.385
9/16	A4-618A	3/8	3/8	5/16	A	.573	.940	.857	.....	1-1/2	.447
5/8	A4-620A	7/16	7/16	3/8	B	.636	.944	.944	.....	1-1/2	.478
11/16	A4-622A	3/8	.....	.....	B	.701	1.025	1.025	.....	1-1/2	.525
3/4	A4-624A	1/2	1/2	7/16	B	.763	1.108	1.108	.....	1-1/2	.572
13/16	A4-626A	9/16	9/16	1/2	B	.826	1.190	1.190	.....	1-1/2	.619
7/8	A4-628A	5/8	5/8	9/16	B	.888	1.271	1.271	.....	1-1/2	.666

STANDARD LENGTH — THIN NOSE SURFACE DRIVE — SINGLE HEXAGON OPENINGS

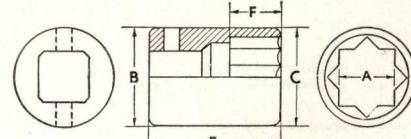
Finish — Rust Resistant

7/16	34-614A	1/4	1/4	1/4 & $\frac{1}{12}$	.....	.513	.878	.671	13/16	1-1/2	.338
1/2	34-616A	5/16	5/16	5/16	.....	.586	.940	.753	49/64	1-1/2	.385
9/16	34-618A	3/8	3/8	5/16	.....	.659	.940	.831	47/64	1-1/2	.447



TYPE A

Double Square (8 Pt.) Openings



TYPE B

Nominal Opening	No.	Amer. Std. Hex Head Tapping Screw	FOR SQUARE NUTS				Type	MAXIMUM DIMENSIONS				
			Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGLR Nut Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
STANDARD LENGTH — DOUBLE SQUARE (8 PT.) OPENINGS FOR SQUARE NUTS												

Finish — Rust Resistant

3/8	4-812	.....	.....	1/4	1/4 & $\frac{1}{12}$	A	.384	.878	.715	1-1/2	.291
7/16	4-814	.....	1/4	5/16	.....	A	.447	.940	.817	1-1/2	.338
1/2	4-816	.....	1/4	5/16	.....	A	.510	1.003	.916	1-1/2	.385
9/16	4-818	.....	.....	3/8	5/16	A	.573	1.128	1.014	1-1/2	.447
5/8	4-820	.....	.....	7/16	3/8	A	.636	1.128	1.108	1-1/2	.478
3/4	4-824	.....	.....	1/2	7/16	B	.763	1.315	1.315	1-1/2	.572
13/16	4-826	.....	.....	1/2	7/16	B	.826	1.407	1.407	1-1/2	.619
7/8	4-828	.....	1/2	9/16	9/16	B	.888	1.516	1.516	1-1/2	.666
15/16	4-830	.....	1/2	5/8	.....	B	.952	1.612	1.612	1-3/4	.713
1	4-832	.....	.....	5/8	.....	B	1.015	1.719	1.719	1-3/4	.760

† Amer. Std. Machine-Screw and Stove-Bolt Nuts.

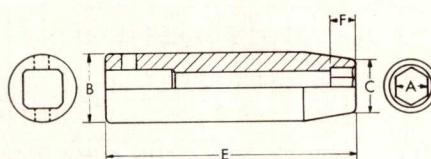
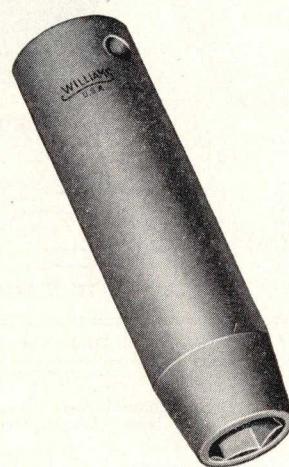
♦ REGISTERED TRADE MARK

WILLIAMS' IMPACT + "SUPER SOCKETS"

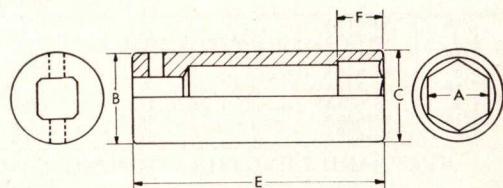
"4" SERIES — BOLT CLEARANCE LENGTH

1/2" SQUARE DRIVE

(Male Square .501-.503 Female Square .504-.506)



TYPE A



TYPE B

Nominal Opening	No.	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
3/8	14-612	.....	3/16	.....	†10	A	.384	.878	.608	3-1/4	.291
7/16	14-614	.....	1/4	1/4	1/4 & †12	A	.447	.878	.691	3-1/4	.338
1/2	14-616	1/4	5/16	5/16	.....	A	.510	.940	.776	3-1/4	.385
9/16	14-618	.....	3/8	3/8	5/16	A	.573	.940	.857	3-1/4	.447
5/8	14-620	.....	7/16	7/16	3/8	B	.636	.940	.940	3-1/4	.478
11/16	14-622	3/8	.....	.....	.....	B	.701	1.025	1.025	3-1/4	.525
3/4	14-624	.....	1/2	1/2	7/16	B	.763	1.108	1.108	3-1/4	.572
13/16	14-626	.....	9/16	.....	1/2	B	.826	1.190	1.190	3-1/4	.619
7/8	14-628	1/2	5/8	9/16	9/16	B	.888	1.276	1.276	3-1/2	.666
15/16	14-630	.....	5/8	.....	.....	B	.952	1.357	1.357	3-1/2	.713
1	14-632	.....	3/4	.....	5/8	B	1.015	1.440	1.440	3-1/2	.760

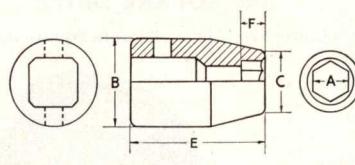
† Amer. Std. Machine-Screw and Stove-Bolt Nuts.

WILLIAMS' IMPACT ♦ "SUPER SOCKETS"

"4" SERIES — STANDARD LENGTH

1/2" SQUARE DRIVE

(Male Square .501-.503 Female Square .504-.506)



Nominal Opening	No.	Amer. Std. Hex Head Tapping Screw	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
			Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGLR Nut Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
3/8	24-612	14 & 1/4					A	.379	.878	.628	1-1/2	.205
7/16	24-614						A	.441	.878	.691	1-1/2	.250
1/2	24-616	5/16					A	.504	.940	.753	1-1/2	.245
9/16	24-618	3/8					A	.566	1.003	.878	1-1/2	.310

STANDARD LENGTH—SINGLE HEXAGON OPENINGS FOR HARDENED AND SELF TAPPING SCREWS

Finish—Copper colored for positive identification

3/8	24-612	14 & 1/4						A	.379	.878	.628	1-1/2	.205
7/16	24-614							A	.441	.878	.691	1-1/2	.250
1/2	24-616	5/16						A	.504	.940	.753	1-1/2	.245
9/16	24-618	3/8						A	.566	1.003	.878	1-1/2	.310

STANDARD LENGTH—SINGLE HEXAGON OPENINGS FOR ZERK TYPE LUBRICATION FITTINGS

Finish—Copper colored for positive identification

3/8	24-612B	{Fits GMC No. 110309—Type C Elbow 45° Fitting...} {Fits GMC No. 191350—Type C Elbow 85-90° Fitting...}						A	.379	.878	.628	1-1/2	.416
7/16	24-614B	{Fits GMC No. 109350—Type C Elbow 67-1/2° Fitting...} Fits GMC No. 109353—Type C Elbow 30° Fitting... Fits GMC No. 109354—Type C Elbow 85-90° Fitting... Fits GMC No. 145435—Type C Special Taper Dr. 67-1/2° Fits GMC No. 145436—Type C Special Taper Dr. 85-90°						A	.441	.878	.691	1-1/2	.478
7/16	24-614	{Fits GMC No. 119512—Type C Straight Fitting...} {Fits GMC No. 145433—Type C Special Taper Dr. Straight}						A	.441	.878	.691	1-1/2	.250

"4" SERIES — ACCESSORIES



EXTENSIONS



Male squares have through pin hole.

No.	Length	Square Male	Square Female
4-105	5	1/2	1/2
4-110	10	1/2	1/2

Male squares have imprisoned spring and plunger.

No.	Length	Square Male	Square Female
4-105A	5	1/2	1/2
4-110A	10	1/2	1/2

HEXAGON—SQUARE SHANKS



Male squares have through pin hole.

No.	Length	Square Male	Hex Male
4-33	2-3/4	1/2	7/16
4-35	5	1/2	7/16
4-53	3	1/2	5/8
4-55	5	1/2	5/8

Male squares have imprisoned spring and plunger.

No.	Length	Square Male	Hex Male
4-33A	2-3/4	1/2	7/16
4-35A	5	1/2	7/16
4-53A	3	1/2	5/8
4-55A	5	1/2	5/8

For Retainer Pins and Neoprene Bands to fit above Extensions see Page 83.

♦ REGISTERED TRADE MARK

DROP-FORGINGS AND

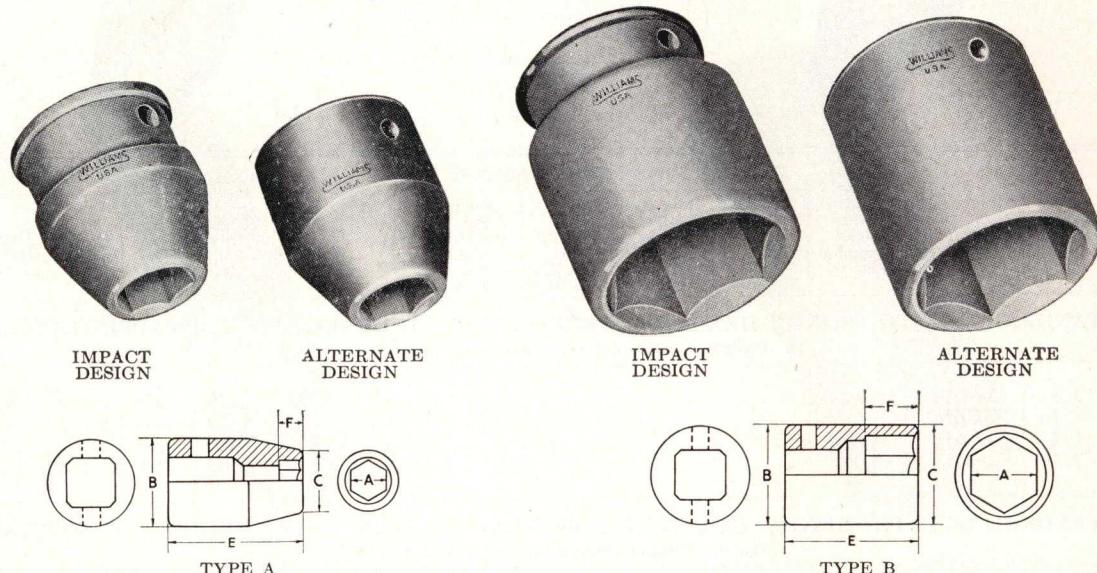
WILLIAMS DROP-FORGED TOOLS

WILLIAMS' IMPACT + "SUPER SOCKETS"

"5" SERIES — STANDARD LENGTH

5/8" SQUARE DRIVE

(Male Square .626-.628 Female Square .628-.631)



Nominal Opening	No.	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS					
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F	
STANDARD LENGTH — IMPACT DESIGN — SINGLE HEXAGON OPENINGS												

*	1/2	5-616	1/4	5/16	5/16	A	.510	1.315	.880	1-1/2	.447
*	9/16	5-618	.....	3/8	5/16	A	.573	1.315	.940	1-1/2	.447
*	5/8	5-620	.....	7/16	3/8	A	.636	1.315	1.019	1-1/2	.478
*	11/16	5-622	3/8	.....	.....	A	.701	1.315	1.101	1-1/2	.510
*	3/4	5-624	.....	1/2	1/2	A	.763	1.315	1.183	1-1/2	.572
*	25/32	5-625	7/16	.....	.....	A	.794	1.315	1.237	1-1/2	.603
*	13/16	5-626	.....	9/16	1/2	A	.826	1.315	1.265	1-1/2	.635
*	7/8	5-628	1/2	5/8	9/16	B	.888	1.315	1.378	1-5/8	.666
*	15/16	5-630	.....	.....	5/8	B	.952	1.315	1.440	1-3/4	.697
†	5-632	.....	3/4	.....	5/8	B	1.015	1.503	1.503	1-3/4	.760
†	1/16	5-634	5/8	.....	3/4	B	1.080	1.503	1.628	2	.822
†	1/8	5-636	.....	7/8	3/4	B	1.142	1.503	1.690	2	.822
†	1/4	5-640	3/4	.....	7/8	B	1.267	1.503	1.815	2	.885
†	5/16	5-642	.....	1	.....	B	1.331	1.503	1.940	2-1/8	1.072
†	3/8	5-644	.....	.....	.....	B	1.395	1.503	2.003	2-1/8	1.072
†	7/16	5-646	7/8	.....	1	B	1.458	1.503	2.065	2-1/4	1.181
†	1/2	5-648	.....	1-1/8	.....	B	1.521	1.503	2.159	2-3/8	1.306

† STANDARD LENGTH — ALTERNATE DESIGN — SINGLE HEXAGON OPENINGS

Finish — Rust Resistant

9/16	A5-618	.....	3/8	3/8	5/16	A	.573	1.128	.851	1-1/2	.447
19/32	A5-619	5/16	.....	3/8	5/16	A	.605	1.128	.899	1-1/2	.447
5/8	A5-620	.....	7/16	7/16	3/8	A	.636	1.128	.910	1-1/2	.478
11/16	A5-622	3/8	.....	.....	.....	A	.701	1.128	1.018	1-1/2	.510
3/4	A5-624	.....	1/2	1/2	7/16	A	.763	1.128	1.018	1-1/2	.572
13/16	A5-626	.....	9/16	.....	1/2	B	.826	1.190	1.190	1-1/2	.635
7/8	A5-628	1/2	5/8	9/16	9/16	B	.888	1.271	1.271	1-1/2	.666
15/16	A5-630	.....	.....	5/8	.....	B	.952	1.357	1.357	1-3/4	.697
1	A5-632	.....	3/4	.....	.....	B	1.015	1.440	1.440	1-3/4	.760
1	1/16	A5-634	5/8	.....	3/4	B	1.080	1.525	1.525	2	.822
1	1/8	A5-636	.....	7/8	.....	B	1.142	1.608	1.608	2	.822
1	1/4	A5-640	3/4	.....	7/8	B	1.267	1.777	1.777	2	.855

† These Sockets have straight walls with no band groove recess.

* DISCONTINUED: will supply until stock is exhausted.

For Retainer Pins and Neoprene Bands to fit Nos. 5-616 thru 5-648 see Page 83.

◆ REGISTERED TRADE MARK

WILLIAMS' IMPACT + "SUPER SOCKETS"

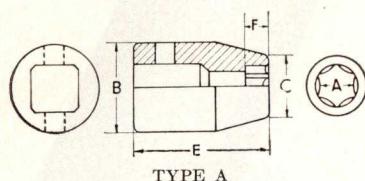
"5" SERIES — STANDARD LENGTH

5/8" SQUARE DRIVE

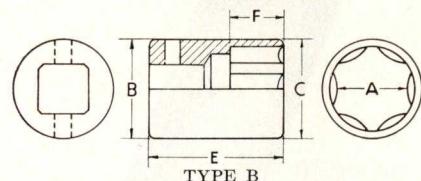
(Male Square .626-.628 Female Square .628-.631)



Surface
Drive



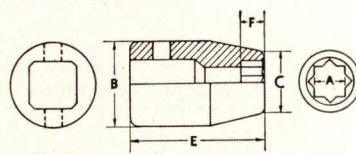
TYPE A



TYPE B

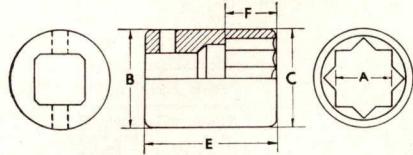
Nominal Opening	No.	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS					
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F	
STANDARD LENGTH — SURFACE DRIVE — SINGLE HEXAGON OPENINGS												

5/8	A5-620A	.....	7/16	7/16	3/8	A	.636	1.128	.940	1-1/2	.478
11/16	A5-622A	3/8	.....	.....	.....	A	.701	1.128	1.018	1-1/2	.510
3/4	A5-624A	.....	1/2	1/2	7/16	A	.763	1.128	1.108	1-1/2	.572
13/16	A5-626A	.....	9/16	.....	1/2	B	.826	1.190	1.190	1-1/2	.635
7/8	A5-628A	1/2	5/8	9/16	9/16	B	.888	1.271	1.271	1-1/2	.666
15/16	A5-630A	.....	.....	5/8	.....	B	.952	1.357	1.357	2	.697
1	A5-632A	.....	3/4	.....	.....	B	1.015	1.440	1.440	2	.760
1 1/16	A5-634A	5/8	.....	3/4	.....	B	1.080	1.525	1.525	2	.822



TYPE A

Double
Square (8 Pt.)
Openings



TYPE B

Nominal Opening	No.	FOR SQUARE NUTS				Type	MAXIMUM DIMENSIONS				
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
STANDARD LENGTH — DOUBLE SQUARE (8 PT.) OPENINGS FOR SQUARE NUTS											

9/16	5-818	.....	.....	3/8	5/16	A	.573	1.128	1.014	1-1/2	.447
5/8	5-820	.....	.....	7/16	3/8	B	.636	1.128	1.128	1-1/2	.478
11/16	5-822	3/8	.....	.....	.....	B	.699	1.253	1.253	1-1/2	.525
3/4	5-824	.....	.....	1/2	7/16	B	.763	1.315	1.315	1-1/2	.572
13/16	5-826	.....	.....	.....	1/2	B	.826	1.407	1.407	1-1/2	.635
7/8	5-828	1/2	.....	9/16	9/16	B	.888	1.516	1.516	1-1/2	.666
15/16	5-830	.....	.....	5/8	.....	B	.952	1.614	1.614	1-3/4	.697
1	5-832	.....	.....	.....	5/8	B	1.015	1.719	1.719	1-3/4	.760
1 1/16	5-834	5/8	.....	3/4	.....	B	1.080	1.836	1.836	2	.822
1 1/8	5-836	.....	.....	.....	3/4	B	1.142	1.933	1.933	2	.822

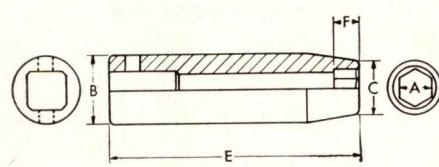
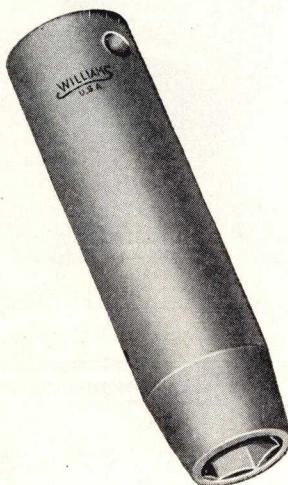
♦ REGISTERED TRADE MARK

WILLIAMS' IMPACT ♦ "SUPER SOCKETS"

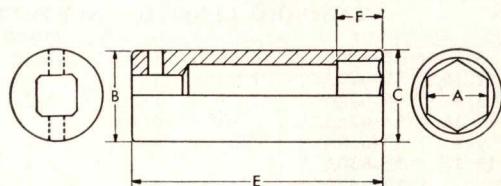
"5" SERIES — BOLT CLEARANCE LENGTH

5/8" SQUARE DRIVE

(Male Square .626-.628 Female Square .628-.631)



TYPE A



TYPE B

Nominal Opening	No.	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
9/16	15-618	.....	3/8	3/8	5/16	A	.573	1.128	.851	3-1/4	.447
5/8	15-620	.....	7/16	7/16	3/8	A	.636	1.128	.940	3-1/4	.478
11/16	15-622	3/8	.....	.....	.....	A	.701	1.128	1.018	3-1/4	.510
3/4	15-624	.....	1/2	1/2	7/16	A	.763	1.128	1.108	3-1/4	.572
13/16	15-626	.....	9/16	.....	1/2	B	.826	1.190	1.190	3-1/4	.635
7/8	15-628	1/2	5/8	9/16	9/16	B	.888	1.276	1.276	3-1/2	.666
15/16	15-630	.....	5/8	.....	.....	B	.952	1.357	1.357	3-1/2	.697
1	15-632	.....	3/4	.....	5/8	B	1.015	1.440	1.440	3-1/2	.760
1 1/16	15-634	5/8	.....	3/4	.....	B	1.080	1.525	1.525	3-1/2	.822

BOLT CLEARANCE LENGTH — SINGLE HEXAGON OPENINGS
Finish — Rust Resistant

9/16	15-618	.....	3/8	3/8	5/16	A	.573	1.128	.851	3-1/4	.447
5/8	15-620	.....	7/16	7/16	3/8	A	.636	1.128	.940	3-1/4	.478
11/16	15-622	3/8	.....	.....	.....	A	.701	1.128	1.018	3-1/4	.510
3/4	15-624	.....	1/2	1/2	7/16	A	.763	1.128	1.108	3-1/4	.572
13/16	15-626	.....	9/16	.....	1/2	B	.826	1.190	1.190	3-1/4	.635
7/8	15-628	1/2	5/8	9/16	9/16	B	.888	1.276	1.276	3-1/2	.666
15/16	15-630	.....	5/8	.....	.....	B	.952	1.357	1.357	3-1/2	.697
1	15-632	.....	3/4	.....	5/8	B	1.015	1.440	1.440	3-1/2	.760
1 1/16	15-634	5/8	.....	3/4	.....	B	1.080	1.525	1.525	3-1/2	.822

♦ REGISTERED TRADE MARK

1-52

WILLIAMS' IMPACT + "SUPER SOCKETS"

"5" SERIES

5/8" SQUARE DRIVE

(Male Square .626-.628 Female Square .628-.631)

ACCESSORIES

EXTENSIONS



Male squares have through pin hole.



Male squares have imprisoned spring and plunger.

No.	Length	Square Male	Square Female
5-106	6	5/8	5/8
5-110	10	5/8	5/8

No.	Length	Square Male	Square Female
5-106A	6	5/8	5/8
5-110A	10	5/8	5/8

HEXAGON—SQUARE SHANKS



Male squares have through pin hole.



Male squares have imprisoned spring and plunger.

No.	Length	Square Male	Hex Male
5-53	3	5/8	5/8
5-55	5	5/8	5/8
5-63	3	5/8	3/4

No.	Length	Square Male	Hex Male
5-53A	3	5/8	5/8
5-55A	5	5/8	5/8
5-63A	3	5/8	3/4

For Retainer Pins and Neoprene Bands to fit above Extensions see Page 83.

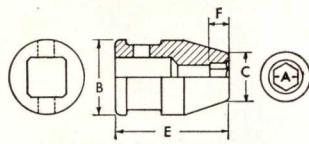
◆ REGISTERED TRADE MARK

WILLIAMS' IMPACT ♦ "SUPER SOCKETS"

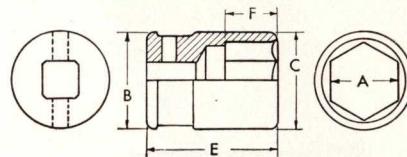
"6" SERIES — STANDARD LENGTH

3/4" SQUARE DRIVE

(Male Square .757-.759 Female Square .759-.764)

All Sockets furnished without
removable snap-ring in drive end.

TYPE A



TYPE B

Nominal Opening	No.	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS					
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam.	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F	
STANDARD LENGTH — SINGLE HEXAGON OPENINGS Finish — Rust Resistant												

1/2	6-616	1/4	5/16	5/16		A	.510	1.503	.940	1-3/4	.572
9/16	6-618	.....	3/8	3/8	5/16	A	.573	1.503	1.003	1-3/4	.572
19/32	6-619	5/16	.....	.....	.....	A	.605	1.503	1.065	1-3/4	.572
5/8	6-620	.....	7/16	7/16	3/8	A	.636	1.503	1.096	1-3/4	.572
11/16	6-622	3/8	.....	.....	.....	A	.701	1.503	1.159	1-3/4	.572
3/4	6-624	.....	1/2	1/2	7/16	A	.763	1.503	1.253	1-3/4	.572
25/32	6-625	7/16	.....	.....	.....	A	.794	1.503	1.284	1-3/4	.572
13/16	6-626	.....	9/16	.....	1/2	A	.826	1.503	1.378	1-7/8	.635
7/8	6-628	1/2	5/8	9/16	9/16	B	.888	1.503	1.503	1-7/8	.635
15/16	6-630	.....	.....	5/8	.....	B	.952	1.503	1.565	1-7/8	.635
1	6-632	.....	3/4	.....	5/8	B	1.015	1.503	1.628	2	.760
1	1/16	6-634	5/8	.....	3/4	B	1.080	1.503	1.690	2	.760
1	1/8	6-636	.....	7/8	.....	B	1.142	1.503	1.753	2-1/8	.885
1	3/16	6-638	.....	.....	.....	B	1.205	1.503	1.878	2-1/8	.885
1	1/4	6-640	3/4	.....	7/8	B	1.267	1.753	2.003	2-1/8	.885
1	5/16	6-642	.....	1	.....	B	1.331	1.753	2.065	2-1/4	1.010
1	3/8	6-644	.....	.....	.....	B	1.395	1.753	2.128	2-1/4	1.010
1	7/16	6-646	7/8	.....	1	B	1.458	1.753	2.253	2-1/4	1.010
*1	1/2	6-648	.....	1-1/8	.....	B	1.521	1.753	2.315	2-3/8	1.135
1	5/8	6-652	1	.....	1-1/8	B	1.648	1.878	2.440	2-3/8	1.135
1	11/16	6-654	.....	1-1/4	.....	B	1.710	1.878	2.503	2-3/8	1.135

STANDARD LENGTH — DOUBLE SQUARE (8 PT.) OPENINGS FOR SQUARE NUTS Finish — Rust Resistant												
--	--	--	--	--	--	--	--	--	--	--	--	--

+	9/16	6-418	.....	.....	3/8	5/16	A	.573	1.503	1.159	1-5/8	.447
+	5/8	6-420	.....	.....	7/16	3/8	A	.636	1.503	1.253	1-5/8	.478
+	3/4	6-424	.....	.....	1/2	7/16	B	.763	1.503	1.503	1-3/4	.572
*+	13/16	6-426	.....	.....	.....	1/2	B	.826	1.503	1.628	1-7/8	.635
+	13/16	6-826	.....	.....	.....	1/2	B	.826	1.503	1.628	1-7/8	.635
7/8	6-828	1/2	.....	.....	9/16	9/16	B	.888	1.503	1.753	1-7/8	.635
15/16	6-830	.....	.....	.....	5/8	.....	B	.952	1.503	1.815	1-7/8	.635
1	6-832	.....	.....	.....	.....	5/8	B	1.015	1.503	1.940	2	.760
1	1/16	6-834	5/8	.....	3/4	.....	B	1.080	1.753	2.003	2	.760
1	1/8	6-836	.....	.....	.....	3/4	B	1.142	1.753	2.128	2-1/8	.885
1	1/4	6-840	3/4	.....	7/8	.....	B	1.267	1.753	2.378	2-1/8	.885

* Can be used for servicing Standard Budd Wheels.

† These sockets have single square openings.

For Retainer Pins and Neoprene Bands to fit above Sockets see Page 83.

◆ REGISTERED TRADE MARK

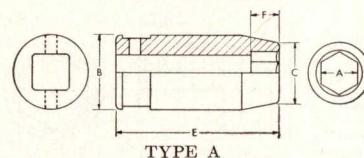
WILLIAMS' IMPACT + "SUPERSOCKETS"

"6" SERIES — BOLT CLEARANCE LENGTH

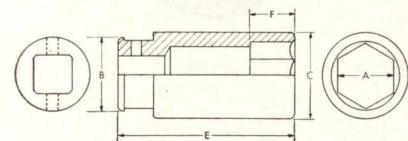
3/4" SQUARE DRIVE

(Male Square .757-.759 Female Square .759-.764)

All Sockets and Extensions
furnished without snap-
ring in drive end.



TYPE A



TYPE B

Nominal Opening	No.	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam.	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
BOLT CLEARANCE LENGTH — SINGLE HEXAGON OPENINGS											

Nominal Opening	No.	Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam.	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt	Type	Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
9/16	16-618			3/8	3/8	A	.573	1.503	1.003	3-1/4	.447
5/8	16-620			7/16	7/16	A	.636	1.503	1.096	3-1/4	.478
11/16	16-622	3/8				A	.701	1.503	1.159	3-1/4	.572
3/4	16-624			1/2	1/2	A	.763	1.503	1.253	3-1/4	.572
13/16	16-626			9/16		A	.826	1.503	1.378	3-1/4	.635
7/8	16-628	1/2		5/8	9/16	B	.888	1.503	1.503	3-1/2	.635
15/16	16-630				5/8	B	.952	1.503	1.565	3-1/2	.635
1	16-632			3/4		B	1.015	1.503	1.628	3-1/2	.760
1 1/16	16-634	5/8			3/4	B	1.080	1.503	1.690	3-1/2	.760
1 1/8	16-636			7/8		B	1.142	1.503	1.753	3-1/2	.885
1 3/16	16-638					B'	1.205	1.503	1.878	3-1/2	.885
1 1/4	16-640	3/4			7/8	B	1.267	1.753	2.003	3-1/2	.885
1 5/16	16-642			1		B	1.331	1.753	2.065	3-1/2	.822
1 7/16	16-646	7/8			1	B	1.458	1.753	2.258	3-1/2	.947
*1 1/2	16-648			1-1/8		B	1.521	1.753	2.315	3-1/2	.947
1 5/8	16-652	1		1-1/8		B	1.648	1.753	2.447	3-1/2	1.010

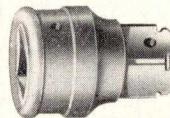
"6" SERIES ACCESSORIES

EXTENSIONS



Male Squares furnished with through pin hole.

ADAPTERS



HEXAGON—SQUARE SHANKS



Male Squares furnished with through pin hole.

No.	Lgth.	Square Male	Square Female
6-107	7	3/4	3/4
6-110	10	3/4	3/4
6-113	13	3/4	3/4

No.	Lgth.	Square Female	Square Male
6-7	2-5/8	3/4	1

No.	Lgth.	Square Male	Hex Male
6-63	3	3/4	3/4

*Can be used for servicing Standard Budd Wheels.

For Retainer Pins and Neoprene Bands to fit above Sockets, Extensions and Adapters see Page 83.

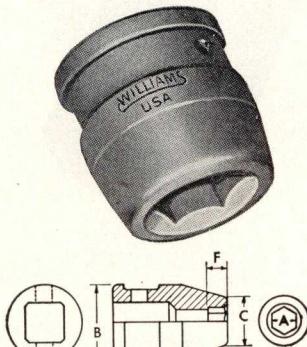
♦ REGISTERED TRADE MARK

WILLIAMS' IMPACT ♦ "SUPER SOCKETS"

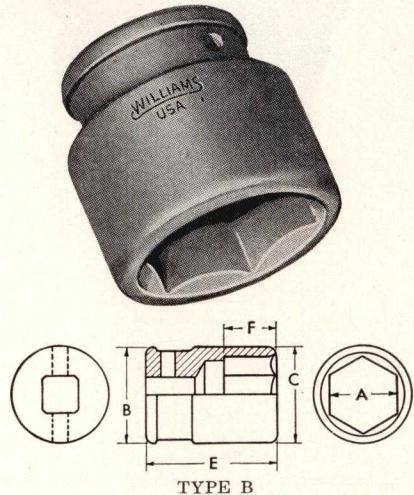
"7" SERIES — STANDARD LENGTH

1" SQUARE DRIVE

(Male Square 1.007-1.009 Female Square 1.009-1.014)

All Sockets and Extensions furnished
with removable snap-ring in drive end.

TYPE A



TYPE B

Nominal Opening	No.	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt		Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
STANDARD LENGTH — SINGLE HEXAGON OPENINGS											

Finish — Rust Resistant

3/4	7-624	.....	1/2	1/2	7/16	A	.763	2.003	1.440	2- 1/16	.572	
13/16	7-626	.....	9/16	1/2	1/2	A	.826	2.003	1.503	2- 1/16	.635	
7/8	7-628	1/2	5/8	9/16	9/16	A	.888	2.003	1.534	2- 1/16	.666	
15/16	7-630	9/16	.....	5/8	.....	A	.952	2.003	1.596	2- 1/16	.697	
1	7-632	.....	3/4	.....	5/8	A	1.015	2.003	1.753	2- 1/16	.697	
1	1/16	7-634	5/8	.....	3/4	A	1.080	2.003	1.753	2- 1/16	.697	
1	1/8	7-636	.....	7/8	.....	A	1.142	2.003	1.815	2- 3/16	.822	
1	1/4	7-640	3/4	.....	7/8	.....	A	1.267	2.128	2.003	2- 3/16	.822
1	5/16	7-642	.....	1	.....	7/8	A	1.331	2.128	2.065	2- 3/16	.822
*1	3/8	7-644	.....	.....	.....	.....	B	1.395	2.128	2.128	2- 5/16	.947
1	7/16	7-646	7/8	.....	1	.....	B	1.458	2.253	2.253	2- 5/16	.947
1	1/2	7-648	.....	1-1/8	.....	1	B	1.521	2.253	2.315	2- 5/16	.947
1	5/8	7-652	1	.....	1-1/8	.....	B	1.648	2.253	2.440	2- 7/16	1.010
1	11/16	7-654	.....	1-1/4	.....	1-1/8	B	1.710	2.253	2.565	2- 7/16	1.010
1	13/16	7-658	1-1/8	.....	1-1/4	.....	B	1.836	2.253	2.753	2- 9/16	1.135
1	7/8	7-660	.....	.....	1-1/4	.....	B	1.898	2.253	2.753	2- 9/16	1.135
2	7-664	1-1/4	.....	1-3/8	.....	.....	B	2.025	2.253	3.003	2-11/16	1.260
*2	1/16	7-666	.....	.....	1-3/8	.....	B	2.087	2.253	3.003	2-11/16	1.260
*2	3/16	7-670	1-3/8	.....	1-1/2	.....	B	2.213	2.253	3.253	2-13/16	1.385
*2	1/4	7-672	.....	.....	1-1/2	.....	B	2.275	2.253	3.253	2-13/16	1.380

BOLT CLEARANCE LENGTHS — SINGLE HEXAGON OPENINGS

Finish — Rust Resistant

1	3/16	17-638	A	1.205	2.128	1.878	3- 1/2	.885
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For Retainer Pins and Neoprene Bands to fit above Sockets see Page 83.

1-52

* DISCONTINUED: will supply until stock is exhausted.

♦ REGISTERED TRADE MARK

WILLIAMS' IMPACT ♦ "SUPER SOCKETS"

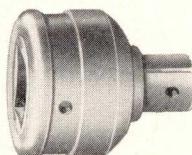
"7" SERIES

1" SQUARE DRIVE

(Male Square 1.007-1.009 Female Square 1.009-1.014)

ACCESSORIES

ADAPTERS



No.	Length	Square Female	Square Male
7-6	3	1	3/4

EXTENSIONS



Male squares are furnished with through pin hole.

No.	Length	Square Male	Square Female
7-106	6	1	1
7-112	12	1	1

HEXAGON — SQUARE SHANKS



Male squares are furnished with through pin hole.

No.	Length	Square Male	Hex Male
7-64	3-9/16	1	3/4

For Retainer Pins and Neoprene Bands to fit above Extensions and Adapters see Page 83.

♦ REGISTERED TRADE MARK

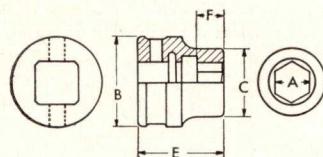
WILLIAMS' IMPACT ♦ "SUPER SOCKETS"

"8" SERIES — STANDARD LENGTH

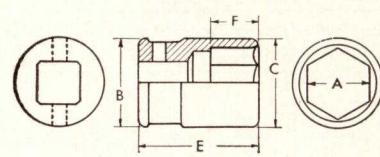
1-1/2" SQUARE DRIVE

(Male Square 1.503-1.505 Female Square 1.505-1.510)

All Sockets furnished with
removable snap-ring in drive end.



TYPE A



TYPE B

Nominal Opening	No.	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt		Nominal Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F

STANDARD LENGTH — SINGLE HEXAGON OPENINGS

Finish — Rust Resistant

1 5/16	8-642	.....	1	.....	7/8	A	1.331	3.253	2.503	3-1/8	1.010
*1 3/8	8-644	.....	.....	.....	.....	A	1.395	3.253	2.753	3-1/8	1.010
1 7/16	8-646	7/8	.....	1	.....	A	1.458	3.253	2.753	3-1/8	1.010
1 1/2	8-648	.....	1-1/8	.....	1	A	1.521	3.253	2.878	3-1/8	1.010
1 5/8	8-652	1	.....	1-1/8	.....	A	1.648	3.253	3.003	3-1/8	1.010
1 11/16	8-654	.....	1-1/4	.....	1-1/8	A	1.710	3.253	3.003	3-1/8	1.010
1 13/16	8-658	1-1/8	.....	.....	.....	A	1.836	3.253	3.128	3-1/4	1.135
1 7/8	8-660	.....	.....	.....	1-1/4	A	1.898	3.253	3.128	3-1/4	1.135
2	8-664	1-1/4	.....	1-3/8	.....	B	2.025	3.253	3.253	3-3/4	1.260
2 1/16	8-666	.....	.....	.....	1-3/8	B	2.087	3.253	3.503	3-7/8	1.260
2 1/8	8-668	.....	.....	.....	.....	B	2.151	3.253	3.503	3-7/8	1.260
2 3/16	8-670	1-3/8	.....	1-1/2	.....	B	2.213	3.253	3.503	3-7/8	1.260

For Retainer Pins and Neoprene Bands to fit above sockets see Page 83.

* DISCONTINUED: will supply until stock is exhausted.

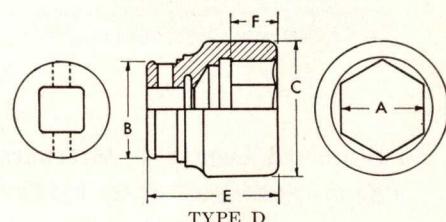
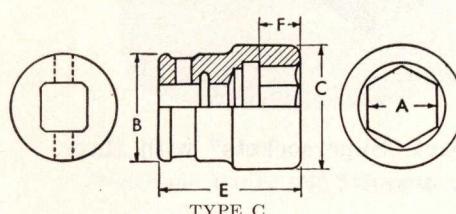
WILLIAMS' IMPACT ♦ "SUPERSOCKETS"

"8" SERIES — STANDARD LENGTH

1-1/2" SQUARE DRIVE

(Male Square 1.503-1.505 Female Square 1.505-1.510)

All Sockets and Extensions furnished with
removable snap-ring in drive end.



Nominal Opening	No.	FOR HEX NUTS AND CAP SCREWS				Type	MAXIMUM DIMENSIONS				
		Amer. Std. HEAVY Nut (U.S.S.) Size Bolt	Amer. Std. Hex Head Cap Screw Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.) Size Bolt	Amer. Std. REGULAR Nut; Size Bolt		Nominal Opening A	Diam. Drive End B	Diam. Nose C	Length Overall E	Depth Opening F
2 1/4	8-672	.	.	.	1-1/2	C	2.275	3.253	3.753	4	1.385
2 3/8	8-676	1-1/2	.	.	.	C	2.401	3.253	3.878	4-1/8	1.385
2 7/16	8-678	.	.	.	1-5/8	C	2.464	3.253	3.878	4-1/8	1.385
2 9/16	8-682	1-5/8	.	.	.	D	2.591	3.253	4.003	4-1/4	1.572
2 5/8	8-684	.	.	.	1-3/4	D	2.653	3.253	4.128	4-1/4	1.572
2 3/4	8-688	1-3/4	.	.	.	D	2.780	3.253	4.253	4-3/8	1.572
*2 15/16	8-694	1-7/8	.	.	.	D	2.967	3.253	4.503	4-1/2	1.635
*3	8-696	.	.	2	.	D	3.030	3.253	4.503	4-5/8	1.635
*3 1/8	8-6100	2	.	.	.	D	3.157	3.253	4.753	4-5/8	1.760
*3 3/8	8-6108	.	.	2-1/4	.	D	3.407	3.253	5.003	4-5/8	1.760
*3 1/2	8-6112	2-1/4	.	.	.	D	3.534	3.253	5.128	4-5/8	1.760

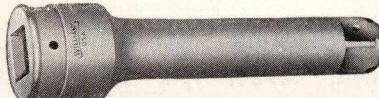
"8" SERIES — SINGLE HEXAGON OPENINGS

Finish — Rust Resistant

2 1/4	8-672	.	.	.	1-1/2	C	2.275	3.253	3.753	4	1.385
2 3/8	8-676	1-1/2	.	.	.	C	2.401	3.253	3.878	4-1/8	1.385
2 7/16	8-678	.	.	.	1-5/8	C	2.464	3.253	3.878	4-1/8	1.385
2 9/16	8-682	1-5/8	.	.	.	D	2.591	3.253	4.003	4-1/4	1.572
2 5/8	8-684	.	.	.	1-3/4	D	2.653	3.253	4.128	4-1/4	1.572
2 3/4	8-688	1-3/4	.	.	.	D	2.780	3.253	4.253	4-3/8	1.572
*2 15/16	8-694	1-7/8	.	.	.	D	2.967	3.253	4.503	4-1/2	1.635
*3	8-696	.	.	2	.	D	3.030	3.253	4.503	4-5/8	1.635
*3 1/8	8-6100	2	.	.	.	D	3.157	3.253	4.753	4-5/8	1.760
*3 3/8	8-6108	.	.	2-1/4	.	D	3.407	3.253	5.003	4-5/8	1.760
*3 1/2	8-6112	2-1/4	.	.	.	D	3.534	3.253	5.128	4-5/8	1.760

"8" SERIES ACCESSORIES

EXTENSIONS



No.	Length	Square Male	Square Female
8-106	6	1-1/2	1-1/2
8-112	12	1-1/2	1-1/2

Male squares of Extensions furnished with through pin hole.

For Retainer Pins and Neoprene Bands to fit above sockets and extensions see Page 83.

* DISCONTINUED: will supply until stock is exhausted.

♦ REGISTERED TRADE MARK

DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' IMPACT + "SUPERSOCKET" SETS

"4" SERIES — STANDARD LENGTH

1/2" SQUARE DRIVE

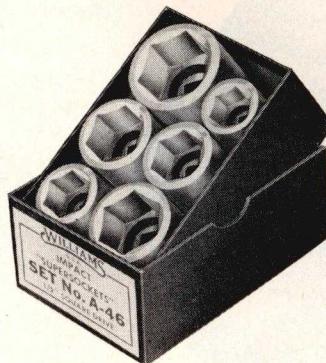
(Male Square .501-.503 Female Square .504-.506)

SET No. A-46

Complete in Cardboard Box

6 Pieces

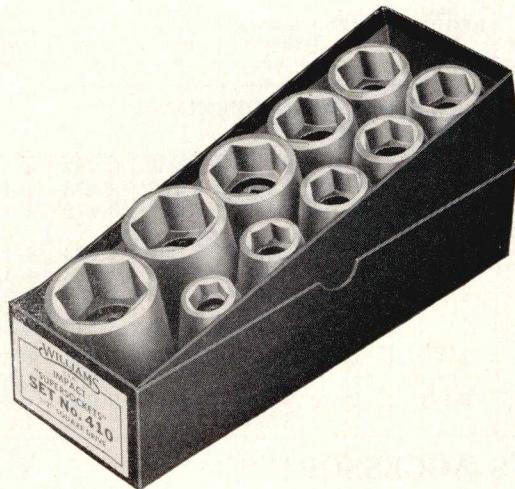
Weight, 1-1/4 lbs.



CONTENTS

6 Standard Length — Alternate Design Impact "Supersockets" with Hexagon Openings — 1/2, 9/16, 5/8, 11/16, 3/4 and 7/8".

For Part Numbers and Dimensions See A-4 Series Standard Length Sockets as Listed on Page 68.



SET No. 410

Complete
In Cardboard Box

10 Pieces

Weight, 1-3/4 lbs.

CONTENTS

10 Standard Length Impact Design "Supersockets" with Hexagon Openings — 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16 and 1".

For Part Numbers and Dimensions See 4 Series Standard Length Sockets as Listed on Page 68.

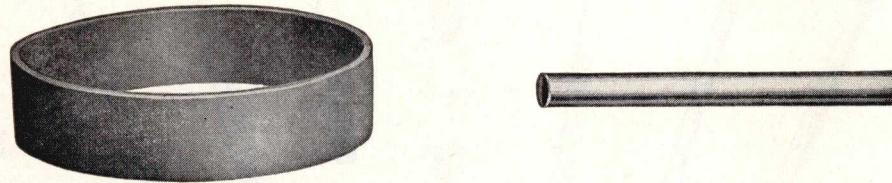
WILLIAMS' IMPACT + "SUPER SOCKETS"

**NEOPRENE BANDS
AND RETAINER PINS**
for
"4" thru "8" SERIES

1/2, 5/8, 3/4, 1 and 1-1/2" Square Drives

Neoprene Bands are specially designed for resistance to oil and grease.

Retainer Pins are made of selected steel—oil finished.



Neoprene Bands and Retainer Pins are packaged separately, 24 of each to a box.

SPECIFICATIONS

Square Drive Size	Socket and Extension Nos.	NEOPRENE BANDS		RETAINER PINS		
		Type	Inside Diameter	Type	Dimensions	
1/2"	4-612 thru 4-628	A	7/8	A	3/16	7/8
	4-630 thru 4-640	B	1-1/8	B	3/16	1-1/8
	4-105 & 4-110	A	7/8	A	3/16	7/8
	4-105A & 4-110A	A	7/8	A	3/16	7/8
5/8"	5-616 thru 5-630	B	1-1/8	B	3/16	1-1/8
	5-632 thru 5-648	C	1-3/8	B	3/16	1-1/8
	5-106 & 5-110	B	1-1/8	B	3/16	1-1/8
	5-106A & 5-110A	B	1-1/8	B	3/16	1-1/8
3/4"	6-616 thru 6-638	C	1-3/8	B	3/16	1-1/8
	6-640 thru 6-654	D	1-5/8	C	3/16	1-1/2
	6-418 thru 6-426	C	1-3/8	B	3/16	1-1/8
	6-826 thru 6-832	C	1-3/8	B	3/16	1-1/8
	6-834 thru 6-840	D	1-5/8	C	3/16	1-1/2
	16-618 thru 16-638	C	1-3/8	B	3/16	1-1/8
	16-640 thru 16-652	D	1-5/8	C	3/16	1-1/2
	6-107, 6-110, 6-113	C	1-3/8	C	3/16	1-1/2
	6-7	C	1-3/8	C	3/16	1-1/2
1"	7-624 thru 7-672	E	1-7/8	D	3/16	1-7/8
	7-106 & 7-112	E	1-7/8	D	3/16	1-7/8
	7-6	E	1-7/8	D	3/16	1-7/8
	17-638	E	1-7/8	D	3/16	1-7/8
1-1/2"	8-642 thru 8-6112	F	2-7/8	E	1/4	2-7/8
	8-106 & 8-112	F	2-7/8	E	1/4	2-7/8

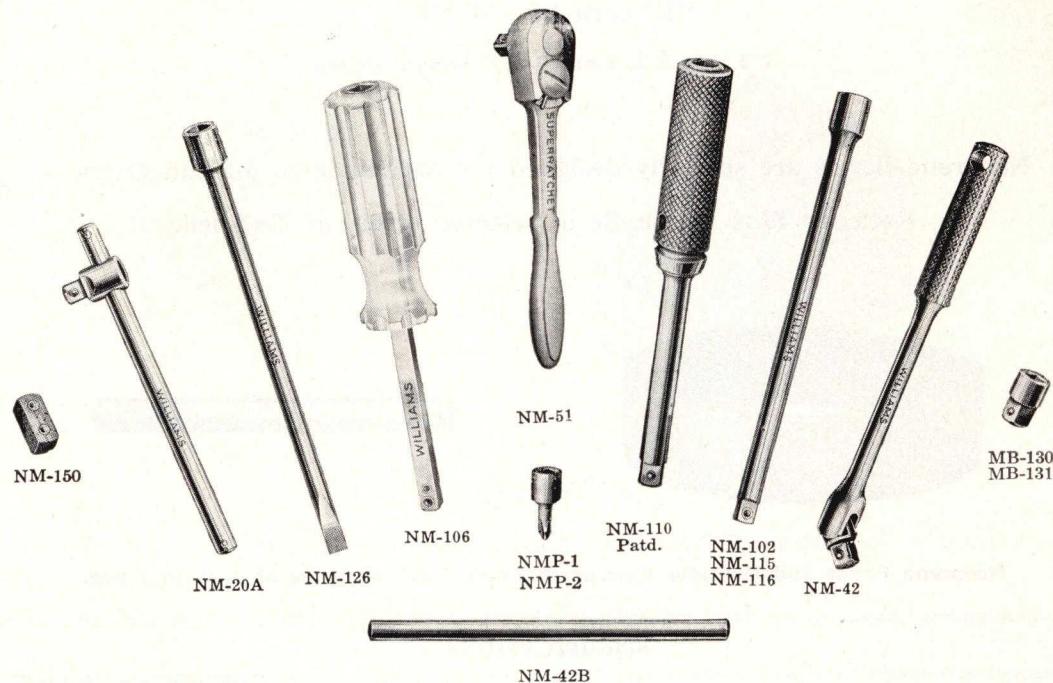
◆ REGISTERED TRADE MARK

WILLIAMS' "SUPER SOCKET" WRENCHES

Selected Alloy Steel

MIDGET PATTERN—1/4" SQUARE DRIVE

HANDLES and PARTS



No.	PI E C E	Weight Each, Lbs.	No.
NM-20A	Sliding T Handle—4-1/2" long.	.1	NM-20A
NM-42	Flex Handle only—5-3/4" long; flexible head, knurled grip, crosshole for use with Sliding Bar.	.25	NM-42
NM-42B	Sliding Bar, 1/4" x 4-1/2", for NM-42.	.08	NM-42B
NM-51	Reversible Ratchet—4-1/2" long. 24 teeth in Ratchet-gear instead of usual 14 to 20. Turning shift-lever reverses action instantly.	.16	NM-51
NM-102	Extension—2" long.	.06	NM-102
NM-106	Extension—Driver has plastic grip with 1/4" square drive-opening in end—6" long	.19	NM-106
NM-110	Extension—Driver has lockable-revolving, knurled handle with 1/4" square drive-opening in end. May be used either as an Extension with handy revolving grip for spinning nuts, or as a Driver with handle locked. A slight turn of the handle locks and unlocks same instantly. 5-3/8" long.	.34	NM-110
NM-115	Extension—6" long.	.17	NM-115
NM-116	Extension—14" long.	.35	NM-116
NM-126	Regular Screw Driver Socket Attachment—6" long.	.09	NM-126
MB-130	Adapter—1/4" square female and 3/8" square male. Adapts Handles with 1/4" square drive to Sockets with 3/8" square drive.	.05	MB-130
MB-131	Adapter—1/4" square male and 3/8" square female. Adapts Sockets with 1/4" square drive to Handles with 3/8" square drive plug.	.05	MB-131
NM-150	Plug Adapter 3/4" long; both ends 1/4" square male.	.02	NM-150
NMP-1	Phillips Screw Driver Socket Attachment—No. 1 Phillips Drive to fit screws No. 4 and smaller.	.02	NMP-1
NMP-2	Phillips Screw Driver Socket Attachment—No. 2 Phillips Drive to fit screws Nos. 5 to 9 inclusive.	.03	NMP-2

WILLIAMS' "SUPER SOCKET" WRENCHES
Selected Alloy Steel

MIDGET PATTERN — 1/4" SQUARE DRIVE

SOCKETS



Regular
6-Point and 12-Point
Openings



Extra Deep
6-Point and 12-Point
Openings



Regular
4-Point and 8-Point
Openings

Williams' Midget Electrical Sockets are unequalled in cramped quarters and for delicate adjustments. Invaluable time-savers on Generators, Wiring-connections, Radios, etc.

Their thin, straight walls enable them to operate readily on troublesome little jobs where no ordinary socket or wrench could even get in and grip the nut. Furnished with openings as listed.

Accurately made from Selected Alloy Steel, heat-treated and chrome-plated. Uniformity of product and tough, dependable strength are assured.

All Sockets packed 6 in a box.

Nominal Opening	6 AND 12-POINT OPENINGS FOR HEX NUTS								4 AND 8-POINT OPENINGS				
	6-Point Sockets		12-Point Sockets		*Extra Deep 6 and 12-Point Sockets		Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Hex Head Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. Machine Screw Hex Nut	Socket No.	Wgt. Each, Lbs.	Nominal Opening
	No.	Wgt. Each, Lbs.	No.	Wgt. Each, Lbs.	No.	Wgt. Each, Lbs.							
3/16	NM-606	.01								No. 2 & 3	NM-406	.03	3/16
7/32	NM-607	.02									NM-407	.03	7/32
1/4	NM-608	.02			NMD-608	.03				4	NM-408	.03	1/4
9/32	NM-609	.02			NMD-609	.03							
5/16			NM-1210	.02	NMD-1210	.04	1/8	1/8		5 & 6	NM-810	.03	5/16
11/32			NM-1211	.03	NMD-1211	.04				8			
3/8			NM-1212	.03	NMD-1212	.04		3/16		10	NM-812	.05	3/8
7/16			NM-1214	.04	NMD-1214	.04		1/4	1/4	12 & 1/4			
1/2			NM-1216	.05			1/4	5/16	5/16				

* 2" long.

REGISTERED TRADE MARK

DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPERSOCKET" WRENCH SETS

Selected Alloy Steel

MIDGET PATTERN

1/4" SQUARE DRIVE



SET No. NM-1

Complete in Metal Case

11 Pieces

9 Sockets and 2 Attachments

Total Weight, 1-1/8 lbs.

2 Color Steel Case Only

1-1/8 x 2-1/8 x 7"

Weight, 5/8 lb.

CONTENTS

9 Midget "Supersockets"—4 6-point openings—3/16, 7/32, 1/4 and 9/32";
5 12-point openings—5/16, 11/32, 3/8, 7/16 and 1/2".

1 NM-20A—Sliding T Handle, 4-1/2" long.

1 NM-106—Extension Driver with Plastic Grip.

SET No. NM-2

Complete in Metal Case

13 Pieces

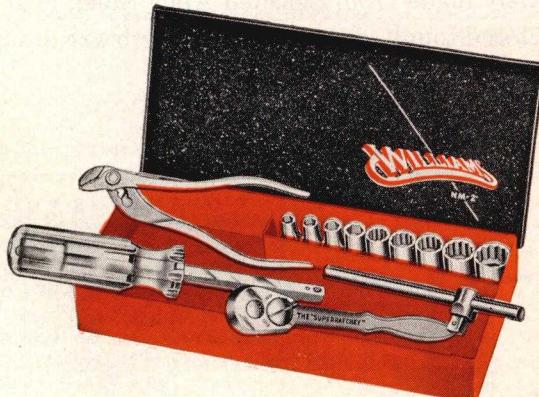
9 Sockets, 3 Attachments
and 1 Plier

Total Weight, 1-5/8 lbs.

2 Color Steel Case Only

1-1/8 x 3-1/4 x 7-1/2"

Weight, 7/8 lb.



CONTENTS

9 Midget "Supersockets"—4 6-point openings—3/16, 7/32, 1/4 and 9/32";
5 12-point openings—5/16, 11/32, 3/8, 7/16 and 1/2".

1 NM-20A—Sliding T Handle, 4-1/2" long.

1 NM-51—Reversible Ratchet, 4-1/2" long.

1 NM-106—Extension Driver with Plastic Grip.

1 1519—Midget "Superplier", 4-1/2" long.

WILLIAMS' "SUPERSOCKET" WRENCH SETS
Selected Alloy Steel
MIDGET PATTERN

1/4" SQUARE DRIVE



Williams' new "Supersocket" Set Boxes have been carefully designed to give the utmost in utility and sturdiness. Covers are finished in Black Satin Wrinkle, bodies in brilliant Williams' Orange Enamel, baked on.

SET No. NM-3

Complete in Metal Case

7 Pieces - 6 Sockets and 1 Attachment

Total Weight, 1-1/8 lbs.

2 Color Steel Case Only

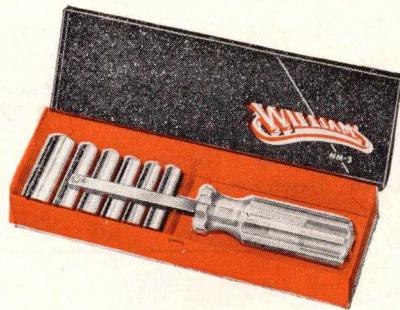
1-1/8 x 2-1/8 x 7"

Weight, 5/8 lb.

CONTENTS

6 Midget Extra Deep "Supersockets"—2 6-point openings
 —1/4 and 9/32"; 4 12-point openings—5/16, 11/32, 3/8 and
 7/16".

1 NM-106 — Extension Driver with Plastic Grip.



SET No. NM-4

Complete in Metal Case

7 Pieces - 6 Sockets and 1 Attachment

Total Weight, 1 lb.

2 Color Steel Case Only

1-1/8 x 2-1/8 x 7"

Weight, 5/8 lb.

CONTENTS

6 Midget Extra Deep "Supersockets"—2 6-point openings
 —1/4 and 9/32"; 4 12-point openings — 5/16, 11/32, 3/8 and
 7/16".

1 NM-51 — Reversible Ratchet, 4-1/2" long.



DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' "SUPERSOCKET" WRENCH SETS
Selected Alloy Steel

MIDGET PATTERN

1/4" SQUARE DRIVE



SET No. NM-5

Complete in Metal Case

17 Pieces

**9 Sockets, 2 Attachments, 5 Wrenches
and 1 Plier**

Total Weight, 1-5/8 lbs.

2 Color Steel Case Only

1-1/8 x 3-1/4 x 7-1/2"

Weight, 7/8 lb.

CONTENTS

9 Midget "Supersockets"—4 6-point openings—
3/16, 7/32, 1/4 and 9/32"; 5 12-point openings—
5/16, 11/32, 3/8, 7/16 and 1/2".
1 NM-20A—Sliding T Handle, 4-1/2" long.
1 NM-106—Extension Driver with Plastic Grip.

1 1519—Midget "Superplier", 4-1/2" long.
5 Midget "Superrenches", 3 to 3-1/2" long, open-
ings—13/64 & 7/32, 15/64 & 1/4, 9/32 & 11/32
1/4 & 5/16 and 5/16 & 3/8".

SET No. NM-6

Complete in Metal Case

23 Pieces

**14 Sockets, 3 Attachments, 5 Wrenches
and 1 Plier**

Total Weight, 2-1/8 lbs.

2 Color Steel Case Only

1-1/8 x 3-1/4 x 7-1/2"

Weight, 1 lb.



CONTENTS

9 Midget "Supersockets"—4 6-point openings—
3/16, 7/32, 1/4 and 9/32"; 5 12-point openings—
5/16, 11/32, 3/8, 7/16 and 1/2".
5 Midget "Supersockets"—3 4-point openings—
3/16, 7/32 and 1/4"; 2 8-point openings—5/16
and 3/8".
1 NM-20A—Sliding T Handle, 4-1/2" long.
1 NM-51—Reversible Ratchet, 4-1/2" long.

1 NM-110—Extension Driver, 5-3/8" long.
1 1519—Midget "Superplier", 4-1/2" long.
5 Midget "Superrenches", 3 to 3-1/2" long, open-
ings—13/64 & 7/32, 15/64 & 1/4, 9/32 & 11/32,
1/4 & 5/16 and 5/16 & 3/8".

♦ REGISTERED TRADE MARK

1-22

WILLIAMS' ♦ "SUPER SOCKET" WRENCH SETS
Selected Alloy Steel

MIDGET PATTERN

1/4" SQUARE DRIVE

SET No. NM-7

Complete in Metal Case

22 Pieces

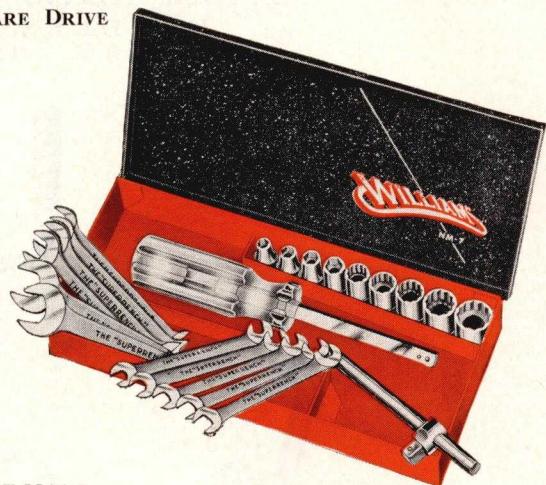
9 Sockets, 2 Attachments and 11 Wrenches

Total Weight, 1-3/4 lbs.

2 Color Steel Case Only

1-1/8 x 3-1/4 x 7-1/2"

Weight, 7/8 lb.



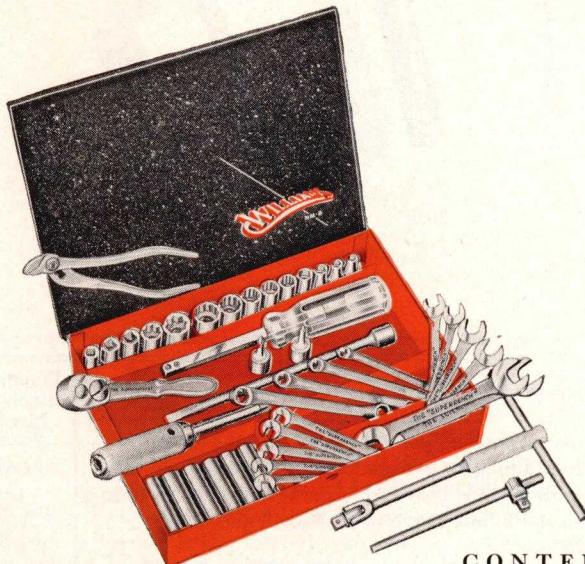
CONTENTS

9 Midget "Supersockets"—4 6-point openings—
3/16, 7/32, 1/4 and 9/32"; 5 12-point openings—
5/16, 11/32, 3/8, 7/16 and 1/2".

1 NM-20A—Sliding T Handle, 4-1/2" long.

1 NM-106—Extension Driver with Plastic Handle.

11 Midget "Superrenches"—15-75° angle openings—
3/16, 13/64, 7/32, 15/64, 1/4, 9/32, 5/16,
11/32, 3/8, 7/16 and 1/2".



CONTENTS

9 Midget "Supersockets"—4 6-point openings—
3/16, 7/32, 1/4 and 9/32"; 5 12-point openings—
5/16, 11/32, 3/8, 7/16 and 1/2".

5 Midget "Supersockets"—3 4-point openings—
3/16, 7/32 and 1/4"; 2 8-point openings —5/16
and 3/8".

6 Midget Extra Deep "Supersockets"—2 6-point
openings—1/4 and 9/32"; 4 12-point openings—
5/16, 11/32, 3/8 and 7/16".

1 NM-20A—Sliding T Handle, 4-1/2" long.

1 NM-42—Flex Handle, 5-3/4" long.

1 NM-42B—Sliding Bar for NM-42.

1 NM-51—Reversible Ratchet, 4-1/2" long.

SET No. NM-8

Complete in Metal Case

45 Pieces

20 Sockets, 9 Attachments, 15 Wrenches
and 1 Plier

Total Weight, 4 lbs.

2 Color Steel Case Only

1-3/8 x 5-7/8 x 8"

Weight, 1-5/8 lbs.

1 NM-106—Extension Driver with Plastic Grip.

1 NM-110—Extension Driver, 5-3/8" long.

1 NM-126—Regular Screw Driver Attachment.

1 NMP-1—Phillips Screw Driver Attachment.

1 NMP-2—Phillips Screw Driver Attachment.

1 1519—Midget "Superplier", 4-1/2" long.

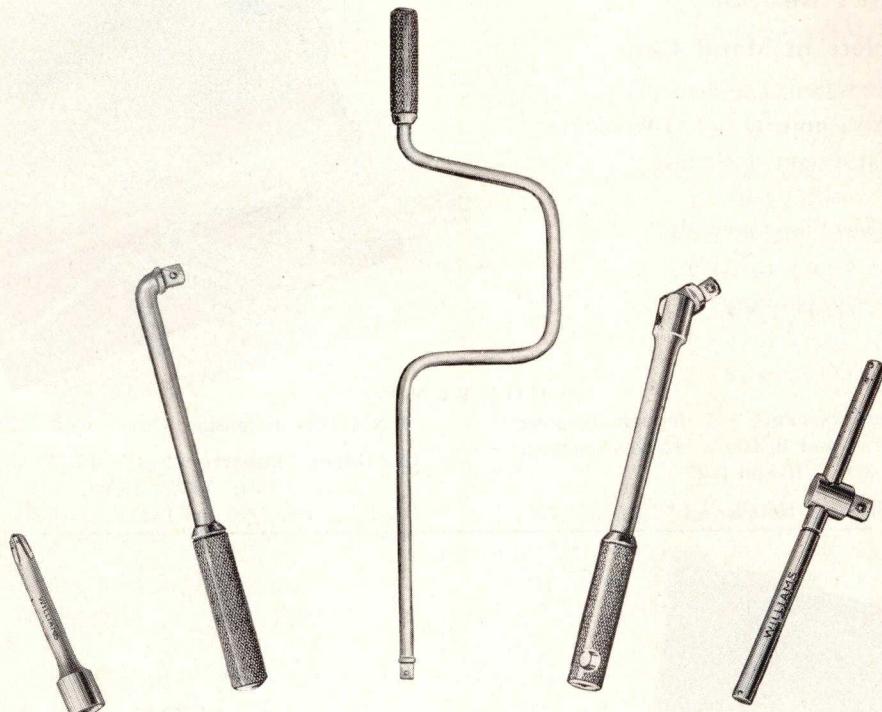
4 Midget Box "Superrenches" with openings
13/64 & 3/16, 15/64 & 7/32, 9/32 & 1/4 and
11/32 & 5/16".

11 Midget "Superrenches"—15-75° angle openings,
3/16, 13/64, 7/32, 15/64, 1/4, 9/32, 5/16,
11/32, 3/8, 7/16 and 1/2".

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "SUPERSOCKET" WRENCHES

Selected Alloy Steel

BANTAM PATTERN — 3/8" SQUARE DRIVE
HANDLES and PARTSBP-2
BP-3
BP-4

B-30

B-15

B-40

B-20A

No.	PI E C E	Weight Each, Lbs.
BP-2	Phillips Screw Driver Socket Attachment—No. 2 Phillips Drive to fit Screws Nos. 5 to 9 incl...	.06
BP-3	Phillips Screw Driver Socket Attachment—No. 3 Phillips Drive to fit Screws Nos. 10 to 16 incl.	.13
BP-4	Phillips Screw Driver Socket Attachment—No. 4 Phillips Drive to fit No. 18 and larger.....	.13
B-15	Speeder—16-1/2" long; Knurled revolving grip.....	1.1
B-20A	Sliding T Handle—6-1/2" long.....	.26
B-30	Offset Handle—7-3/4" long; Knurled grip.....	.50
B-40	Flex Handle—8-1/2" long; flexible head. Knurled grip with 3/8" square drive hole in end; 3/8" cross hole for Sliding Bar—may be used as Extension.....	.57
B-42B	Sliding Bar, 5/16" rd. x 6", for B-40.....	.08

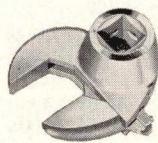
ADJUSTABLE CROWFOOT ATTACHMENT

PATENT APPLIED FOR

No. BC-6 — Capacity, 3/4"

May be used with any combination of 3/8" square drive Handles or Parts.
 This ingenious attachment combines the flexibility of the detachable socket
 system with all the advantages of the adjustable wrench.

Weight, .19 Lb.

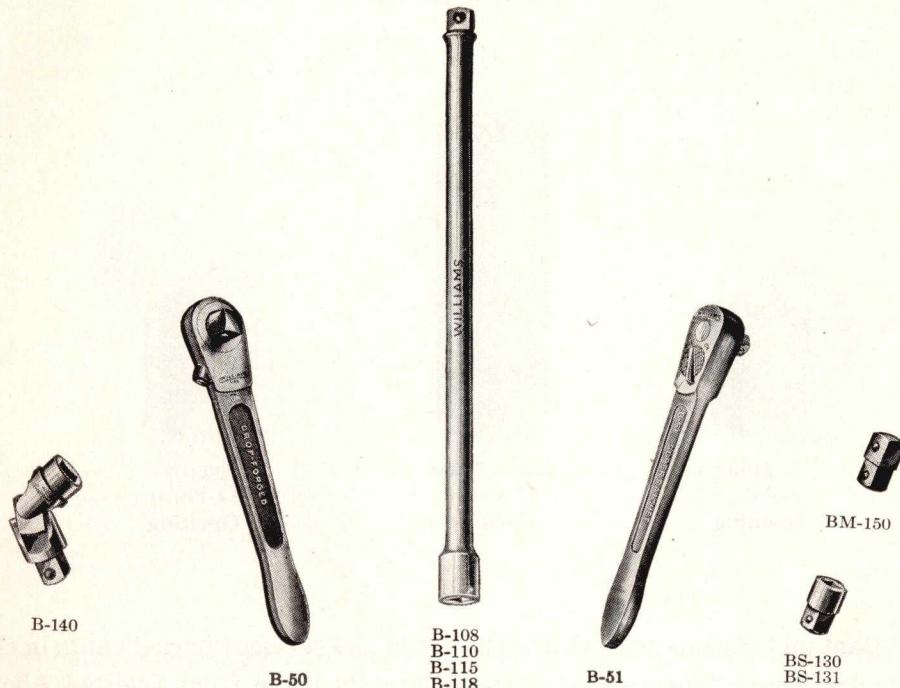


◆ REGISTERED TRADE MARK

1-52

WILLIAMS' "SUPERSOCKET" WRENCHES
Selected Alloy Steel

BANTAM PATTERN — 3/8" SQUARE DRIVE
HANDLES and PARTS



No.	PI E C E	Weight Each, Lbs.
B-50	Drop-Forged Ratchet—6-1/2" long; complete with No. B-150 Plug-Connector.....	.43
B-50A	Ratchet—Same as B-50 above, but with 1/4" square drive-opening in ratchet wheel and 1/4" square hole near end of handle, for Refrigeration Service. Without Plug-Connector.....	.43
B-50B	Ratchet—Same as B-50, but with 5/16" square drive-opening. No Plug-Connector.....	.43
B-51	Reversible Ratchet—6-1/2" long. 24 teeth in ratchet-gear instead of usual 14 or 16. Turning shift-lever reverses action instantly.....	.44
B-51A	Reversible Ratchet for Refrigeration Service—same as B-51, but has both 3/8" sq. male and 1/4" sq. female ratchet drive. Also has 3/16" and 1/4" sq. drive holes in handle end.....	.44
B-108	Extension Bar—3" long.....	.16
B-110	Extension Bar—5-1/2" long.....	.23
B-115	Extension Bar—10-1/2" long.....	.44
B-118	Extension Bar—18" long.....	.84
BS-130	Adapter—3/8"square female and 1/2" square male .....	.13
BS-131	Adapter—3/8" square male and 1/2" square female.....	.15
B-140	Universal Joint—Fitted with spring tension to maintain operating angle desired—range approx. 140° .....	.13
B-150	Ratchet Plug-Connector for B-50 Ratchet.....	.03
BM-150	Adapter—3/8" square male and 1/4" square male.....	.03

♦ REGISTERED TRADE MARK

DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPER SOCKET" WRENCHES
Selected Alloy Steel

BANTAM PATTERN

3/8" Square Drive

S O C K E T T S



Williams' "Bantam" Sockets with thin walls get in and service "buried" nuts in close and awkward corners. These "Supersockets" are accurately made from Selected Alloy Steel, heat-treated and chrome-plated. All Sockets packed 6 in a box.

Size Opening	6 Pt. Opngs		12-Point Openings				Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Hd. Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std.				
	Regular		Regular		Extra Deep					REGLR. Nut	Mach. Screw			
	No.	Wgt. Ea.	No.	Wgt. Ea.	No.	Wgt. Ea.								
1/4	B-608	.04	B-1210	.04							No. 4			
5/16	B-610	.04	B-1211	.05							5 & 6			
11/32	B-611	.05	B-1212	.05	BD-1212	.09					8			
3/8	B-612	.05	B-1214	.05	BD-1214	.1					10			
7/16	B-614	.05	B-1216	.06	BD-1216	.1	1/4	5/16	5/16	1/4	12-1/4			
1/2	B-616	.06	B-1217	.07	B-1218	.07	BD-1218	.13						
17/32			B-1219	.08										
9/16	B-618	.07	B-1220	.09	BD-1220	.16	5/16			5/16	5/16			
19/32			B-1222	.11	BD-1222	.22	3/8			3/8	3/8			
5/8	B-620	.09	B-1224	.13	BD-1224	.22								
11/16	B-622	.11	B-1226	.15	BD-1226	.24								
3/4	B-624	.13	B-1228	.17										
13/16														
7/8														

† 2 to 2-5/8" long has Cross Hole for 9/32" Bar.

1-52

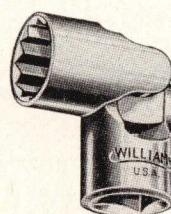
♦ REGISTERED TRADE MARK

WILLIAMS' "SUPERSOCKET" WRENCHES
Selected Alloy Steel

BANTAM PATTERN

3/8" Square Drive

S O C K E T S



Universal
12-Point
Opening



Extra Deep
8-Point
Opening



Crowfoot

All Universal Sockets have an operating range of approximately 130° and are fitted with spring tension to maintain the operating angle desired. Crowfoot attachments are designed for use in close quarters and fit all Bantam attachments.

Size Open- ing	12-Point Universal Sockets		Crowfoot Wrench Attachments		Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex Hd. Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std.		8-POINT OPENINGS	
	No.	Wgt. Ea.	No.	Wgt. Ea.				REGLR. Nut	Mach. Screw	*Extra Deep 8-Point Sockets	Size Open- ing
										No.	Wgt. Ea.
3/8	BU-1212	.09	BC-1700	.08		3/16			10		3/8
7/16	BU-1214	.09	BC-1701	.08		1/4	1/4	1/4	12-1/4	BD-814	.09
1/2	BU-1216	.09	BC-1001	.11	1/4	5/16	5/16			BD-816	.13
9/16	BU-1218	.1	BC-1702	.11		3/8	3/8	5/16	5/16	BD-818	.14
5/8	BU-1220	.11	BC-1703	.18		7/16	7/16	3/8	3/8	BD-820	.18
11/16	BU-1222	.11	BC-1003	.18	3/8						11/16
3/4	BU-1224	.13				1/2	1/2	7/16			3/4

◆ REGISTERED TRADE MARK

* 1-1/2" long

WILLIAMS' ♦ "SUPER SOCKET" WRENCH SETS
Selected Alloy Steel
BANTAM PATTERN
 3/8" SQUARE DRIVE



SET No. B-1

Complete in Metal Case

11 Pieces
 10 Sockets and 1 Attachment
 Total Weight, 1-3/4 lbs.

2 Color Steel Case Only
 1-3/4 x 2-1/4 x 7-3/4"
 Weight, 3/4 lb.

CONTENTS

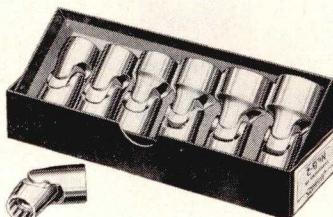
10 Bantam "Supersockets" — 1 6-point opening — 1/4"; 9 12-point openings — 5/16, 11/32, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16 and 3/4".
 1 B-51 — Reversible Ratchet, 6-1/2" long.

SET No. B-2

Complete in Cardboard Box

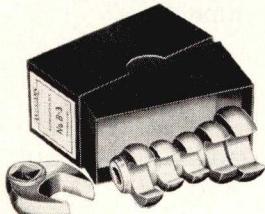
7 Pieces

Weight, 3/4 lb.



CONTENTS

7 Bantam Universal "Supersockets" — with 12-point openings — 3/8, 7/16, 1/2, 9/16, 5/8, 11/16 and 3/4".



SET No. B-3

Complete in Cardboard Box

6 Pieces

Weight, 1/2 lb.

CONTENTS

6 Bantam Crowfoot Attachments with openings — 3/8, 7/16, 1/2, 9/16, 5/8 and 11/16".

SET No. B-7

Complete in Cardboard Box

10 Pieces

Weight, 3/4 lb.



CONTENTS

10 Bantam "Supersockets" with 6-point openings — 1/4, 5/16, 11/32, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16 and 3/4".

WILLIAMS' "SUPER SOCKET" WRENCH SETS

Selected Alloy Steel

BANTAM PATTERN

3/8" SQUARE DRIVE



SET No. B-4

Complete in Metal Case

18 Pieces

10 Sockets and 8 Attachments

Total Weight, 6-3/8 lbs.

2 Color Steel Case Only

1-1/4 x 5-1/4 x 17-3/4"

Weight, 2-5/8 lbs.

CONTENTS

10 Bantam "Supersockets"— 1 6-point opening — 1/4"; 9 12-point openings — 5/16, 11/32, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16 and 3/4".	1 B-51 —Reversible Ratchet, 6-1/2" long.
1 B-15 —Speeder—16-1/2" long, revolving grip.	1 B-108 —Extension Bar, 3" long.
1 B-20A —Sliding T Handle, 6-1/2" long.	1 B-110 —Extension Bar, 5-1/2" long.
1 B-40 —Flex Handle, 8-1/2" long.	1 B-115 —Extension Bar, 10-1/2" long.
	1 B-140 —Universal Joint, range approx. 140°.

DROP-FORGINGS AND

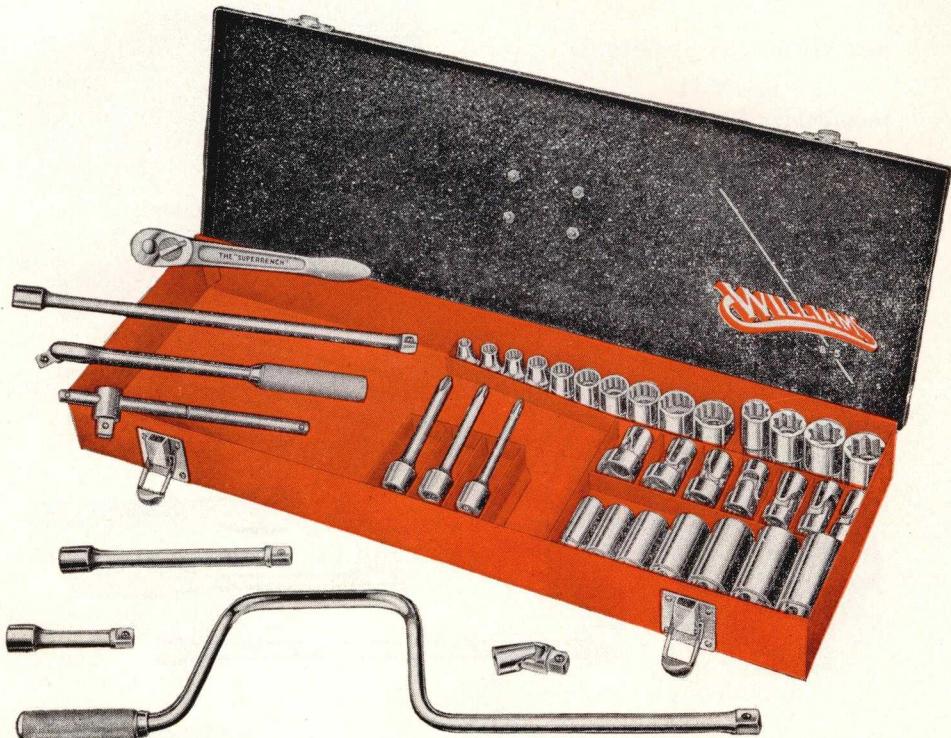
WILLIAMS DROP-FORGED TOOLS

WILLIAMS' "SUPER SOCKET" WRENCH SETS

Selected Alloy Steel

BANTAM PATTERN

3/8" SQUARE DRIVE



SET No. B-5

Complete in Metal Case

39 Pieces

28 Sockets and 11 Attachments

Total Weight, 11-3/8 lbs.

2 Color Steel Case Only

2 x 6-1/2 x 19-1/4"

Weight, 5 lbs.

CONTENTS

10 Bantam "Supersockets"—1 6-point opening—
1/4"; 9 12-point openings—5/16, 11/32, 3/8,
7/16, 1/2, 9/16, 5/8, 11/16 and 3/4".

7 Bantam Universal "Supersockets"—12-point
openings—3/8, 7/16, 1/2, 9/16, 5/8, 11/16 and
3/4".

4 Bantam Extra Deep "Supersockets" with 8-
point openings—7/16, 1/2, 9/16 and 5/8".

7 Bantam Extra Deep "Supersockets" with 12-
point openings—7/16, 1/2, 9/16, 5/8, 11/16,
3/4 and 13/16".

1 B-15 — Speeder, 16-1/2" long with revolving
grip.

1 B-20A — Sliding T Handle, 6-1/2" long.

1 B-40 — Flex Handle, 8-1/2" long.

1 B-51 — Reversible Ratchet, 6-1/2" long.

1 B-108 — Extension Bar, 3" long.

1 B-110 — Extension Bar, 5-1/2" long.

1 B-115 — Extension Bar, 10-1/2" long.

1 B-140 — Universal Joint, range approx. 140°.

1 BP-2 — Phillips Screw Driver Attachment.

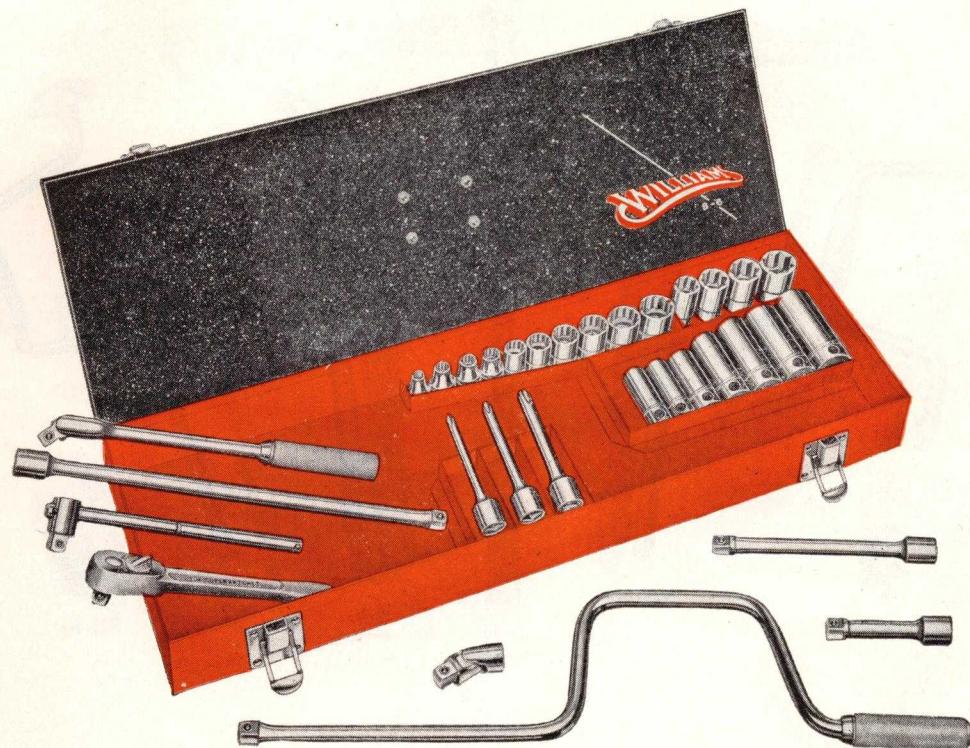
1 BP-3 — Phillips Screw Driver Attachment.

1 BP-4 — Phillips Screw Driver Attachment.

♦ REGISTERED TRADE MARK

1-52

WILLIAMS' ♦ "SUPER SOCKET" WRENCH SETS
Selected Alloy Steel
BANTAM PATTERN
 3/8" SQUARE DRIVE



SET No. B-6

Complete in Metal Case

32 Pieces

21 Sockets and 11 Attachments

Total Weight, 10-1/2 lbs.

2 Color Steel Case Only

2 x 6-1/2 x 19-1/4"

Weight, 4-7/8 lbs.

C O N T E N T S

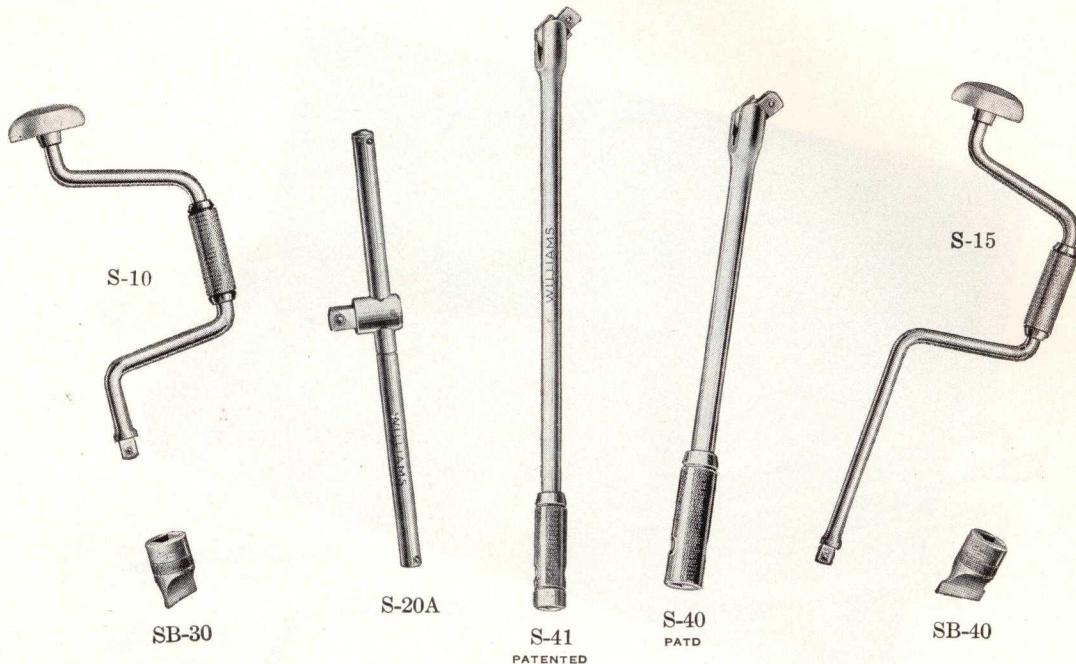
10 Bantam "Supersockets"—1 6-point opening— 1/4"; 9 12-point openings—5/16, 11/32, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16 and 3/4".	1 B-40—Flex Handle, 6-1/2" long.
4 Bantam Extra Deep "Supersockets" with 8-point openings—7/16, 1/2, 9/16 and 5/8".	1 B-51—Reversible Ratchet, 6-1/2" long.
7 Bantam Extra Deep "Supersockets" with 12-point openings—7/16, 1/2, 9/16, 5/8, 11/16, 3/4 and 13/16".	1 B-108—Extension Bar, 3" long.
1 B-15—Speeder, 16-1/2" long with revolving grip.	1 B-110—Extension Bar, 5-1/2" long.
1 B-20A—Sliding T Handle, 6-1/2" long.	1 B-115—Extension Bar, 10-1/2" long.
	1 B-140—Universal Joint, range approx. 140°.
	1 BP-2—Phillips Screw Driver Attachment.
	1 BP-3—Phillips Screw Driver Attachment.
	1 BP-4—Phillips Screw Driver Attachment.

DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' "SUPER SOCKET" WRENCHES
Selected Alloy Steel

STANDARD HANDLES and PARTS—1/2" SQUARE DRIVE

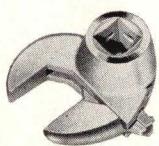


No.	PI E C E	Weight Each, Lbs.	No.
S-10	Speeder—12" long, with knurled revolving grips.....	1.8	S-10
S-15	Speeder—17-1/2" long, with knurled revolving grips.....	2.	S-15
S-20A	Sliding T Handle—11" long.....	.96	S-20A
SB-30	Screw Driver Socket Attachment—7/64 x 15/16" blade.....	.14	SB-30
SB-40	Screw Driver Socket Attachment—3/32 x 1-1/4" blade.....	.16	SB-40
S-40	Flex Handle—12" long; flexible head. Knurled grip with 1/2" square drive hole in end—may be used as Extension; 7/16" round cross hole for Bar.....	1.4	S-40
S-41	Flex Handle—17-1/4"—flexible head. Knurled grip—1/2" square drive hole in end for use as Extension; 7/16" round cross hole for Bar.....	1.9	S-41
S-42B	Sliding Bar, 7/16" x 9", for Flex Handle S-40 and S-41.....	.35	S-42B

ADJUSTABLE CROWFOOT ATTACHMENT

PATENT APPLIED FOR

No. SC-8 — Capacity, 15/16"



May be used with any combination of 1/2" square drive Handles or Parts. This ingenious attachment combines the flexibility of the detachable socket system with all the advantages of the adjustable wrench.

Weight, .37 Lb.



♦ REGISTERED TRADE MARK

1-52

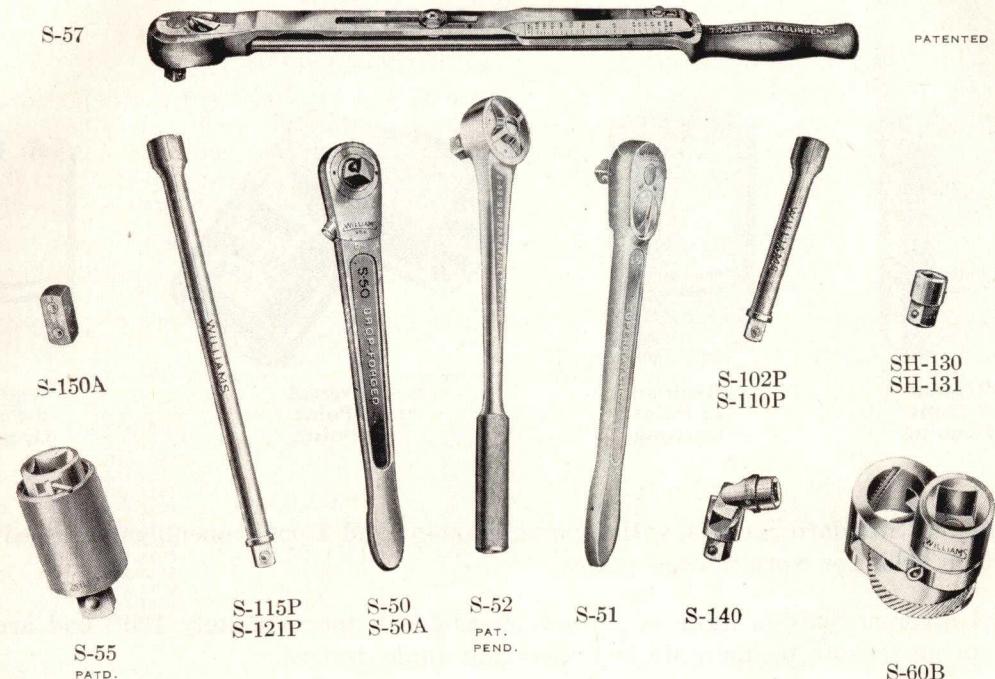
DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPER SOCKET" WRENCHES
Selected Alloy Steel

STANDARD HANDLES and PARTS—1/2" SQUARE DRIVE



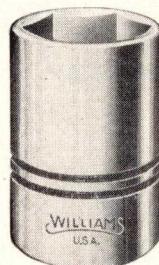
No.	PI E C E	Weight Each, Lbs.	No.
S-50	Ratchet—10" long, complete with Locked-in Plug Connector.....	1.3	S-50
S-50A	Ratchet—10" long, without Plug Connector.....	1.3	S-50A
S-51	Reversible Ratchet—10-1/2" long, 24 teeth in Ratchet-gear instead of usual 16. Turning shift-lever reverses action instantly.....	1.4	S-51
S-52	Reversible Ratchet—11-1/4" long. Concentric type mechanism of 82 tooth action permits rotation of nuts in close quarters. Unique design of shifter provides instantaneous reverse action and one-hand operation.....	1.2	S-52
S-55	Reversible Ratchet Adapter—2-9/16" long; outside diameter 1-1/4". Shift-lever reverses action instantly. Male and female connections 1/2" square drive. Makes ratchet action possible with Speeders, T Handles, Flex Handles, etc., in close quarters.....	.5	S-55
S-57	Torque "Measurrench"—19-1/2" long; indicates R.H. Torque. Has torque-indicating signal. Action reverses instantly for general use. See page 128.....	3.7	S-57
S-60B	Stud Remover—1/2" square drive. Stud capacity 1/4" to 3/4".....	.52	S-60B
S-102P	Extension Bar—2-1/2" long.....	.27	S-102P
S-110P	Extension Bar—5-1/2" long.....	.53	S-110P
S-115P	Extension Bar—10-1/2" long.....	1.	S-115P
S-121P	Extension Bar—20" long.....	2.1	S-121P
SH-130	Adapter—1/2" square female and 3/4" square male.....	.31	SH-130
SH-131	Adapter—1/2" square male and 3/4" square female.....	.44	SH-131
S-140	Universal Joint—Fitted with spring tension to maintain operating angle desired Range approx. 140°.....	.34	S-140
S-150A	Ratchet Plug-Connector for S-50 Ratchet.....	.08	S-150A

♦ REGISTERED TRADE MARK

WILLIAMS' "SUPER SOCKET" WRENCHES
Selected Alloy Steel

STANDARD PATTERN — 1/2" SQUARE DRIVE

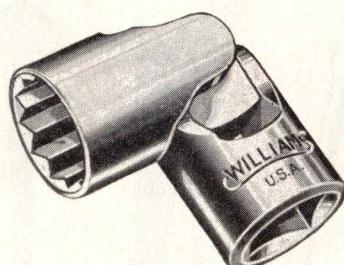
REGULAR SOCKETS



Regular
6-Point
Opening



Regular
12-Point
Opening



Universal
12-Point
Opening



Regular
8-Point
Opening

Williams' Standard Sockets, with 6-point, 12-point and 8-point openings as listed below, have thin walls for work in close places.

All Universal Sockets have an operating range of approximately 130° and are fitted with spring tension to maintain the operating angle desired.

Accurately made from Selected Alloy Steel, heat-treated and chrome-plated. All sockets packed 6 in a box.

Whitworth Standard and Metric sizes listed on page 216.

Nominal Open- ing	6 AND 12-POINT OPENINGS FOR HEX NUTS							8-POINT OPENINGS						
	Straight Wall 6-Point Sockets		Straight Wall 12-Point Sockets		Universal 12-Point Sockets		For Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	For Amer. Std. Hex Head Cap Screw Diam. Screw	For Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	For Amer. Std. REGULAR Nut; Size Bolt				
	No.	Wgt. Ea.	No.	Wgt. Ea.	No.	Wgt. Ea.				No.	Wgt. Each Lbs.	Nom- inal Open- ing		
3/8	ST-612	.10	ST-1212	.10				3/16				ST-810	.14	5/16
7/16	ST-614	.11	ST-1214	.11				1/4		1/4		ST-812	.14	3/8
1/2	ST-616	.12	ST-1216	.12	SU-1216	.24	1/4	5/16	5/16			ST-814	.14	7/16
9/16	ST-618	.12	ST-1218	.12	SU-1218	.25		3/8	3/8	5/16		ST-816	.17	1/2
*9/16	SF-618	.13	SF-1218	.13								ST-818	.23	9/16
19/32	ST-619	.13	ST-1219	.13			5/16		7/16			ST-0818	.14	9/16
5/8	ST-620	.14	ST-1220	.14	SU-1220	.26		7/16	7/16	3/8		ST-820	.30	5/8
21/32	ST-621	.14	ST-1221	.14								ST-822	.32	11/16
11/16	ST-622	.16	ST-1222	.16	SU-1222	.27	3/8		1/2			ST-824	.38	3/4
3/4	ST-624	.19	ST-1224	.19	SU-1224	.29		7/16		1/2		ST-828	.53	7/8
25/32	ST-625	.21	ST-1225	.21								ST-832	.65	1
13/16	ST-626	.24	ST-1226	.24					9/16					
7/8	ST-628	.28	ST-1228	.28				1/2	5/8	9/16				
15/16	ST-630	.32	ST-1230	.32				9/16		5/8				
31/32			ST-1231	.34										
1	ST-632	.38	ST-1232	.38					3/4					
1 1/16			ST-1234	.39				5/8		3/4				
1 1/8			ST-1236	.43					7/8					
1 3/16			ST-1238	.51						3/4				
1 1/4			ST-1240	.53				3/4		7/8				

* All Ford 6, Ford-Mercury V-8, 85 HP, 90 HP and 100 HP Connecting Rods. Use with Torque wrench required on models having "Marsden" self-locking nuts. Not guaranteed because of extra thin walls.

† For all Ford V-8 85 HP Main Bearing bolt heads.

◆ REGISTERED TRADE MARK

WILLIAMS' "SUPERSOCKET" WRENCHES

Selected Alloy Steel

STANDARD PATTERN - 1/2" SQUARE DRIVE

EXTRA DEEP 12-POINT SOCKETS

For Spark Plugs and "Buried" Nuts

Especially designed for Spark Plug and other service, such as U Bolts and Brake-Rod-Ends, where the nuts lie some distance from the outer end of the threaded stem. Long, slim sockets with thin walls for use in cramped places. Their 12-point openings permit operation in close quarters where the handle can be swung only 30°.

Carefully made from Selected Alloy Steel, heat-treated and chrome-plated. Packed 3 in a box.



**Cross Hole
For Bar**

12-Point Opening	EXTRA DEEP Sockets			Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. Hex Head Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. REGULAR Nut; Size Bolt
	No.	Length	Wgt. Ea.				
* 1/2	SD-1216	3-1/4	.26	1/4	5/16	5/16	5/16
* 9/16	SD-1218	3-1/4	.26	.....	3/8	3/8	3/8
* 5/8	SD-1220	3-1/4	.26	.....	7/16	7/16	3/8
* 11/16	SD-1222	3-1/4	.26	3/8	.....	.....	.....
3/4	SD-1224	3-1/4	.37	.....	1/2	1/2	7/16
25/32	SD-1225	3-1/4	.37	7/16	.....	.....	.....
* 13/16	SD-1226	3-1/4	.37	.....	9/16	.....	1/2
7/8	SD-1228	3-1/4	.45	1/2	5/8	9/16	9/16
‡* 7/8	SD-1228T	3-1/4	.29	.....	.....	.....	.....
* 15/16	SD-1230	3-1/4	.51	9/16	.....	5/8	.....
* 1	SD-1232	3-1/4	.52	.....	3/4	.....	5/8
1-1/16	SD-1234	3-1/4	.63	5/8	.....	3/4	.....
* 1-1/8	SD-1236	3-1/4	.74	.....	7/8	.....	3/4

* Popular Spark Plug Sizes.

† Not guaranteed because
of extra thin walls.

SD-1220 services AC No. 104, Champion
Nos. Y-4A and Y-5, 10mm. Plugs.

SD-1222 services AC No. 103-S, AC No.
M-8, Champion No. Y-4 and Auto-

Lite No. P-4, 10mm. Spark Plugs.

SD-1226 services 14mm. Spark Plugs.

SD-1228T services 18mm. Spark Plugs.

SD-1230 services many buses and trucks.

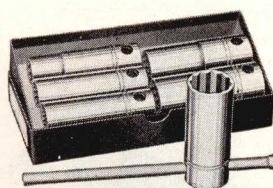
SD-1232 services 18mm. Spark Plugs on
cars; also many buses and trucks.

SD-1236 services many buses and trucks.

WILLIAMS' "SUPERSOCKET" WRENCH SETS
Selected Alloy Steel

STANDARD PATTERN — 1/2" SQUARE DRIVE

SPARK PLUG SOCKET SETS



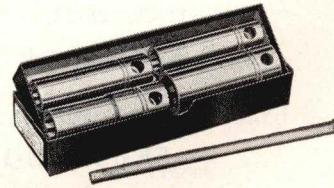
SET No. S-8

Complete in Cardboard Box

Weight, 2-3/8 lbs.

CONTENTS

- 6 Standard Extra Deep "Supersockets" with 12-point openings—9/16, 5/8, 11/16, 13/16, 7/8 and 1".
- 1 Sliding Bar—7" long.



SET No. S-9

Complete in Cardboard Box

Weight, 1-5/8 lbs.

CONTENTS

- 4 Standard Extra Deep "Supersockets" with 12-point openings—5/8, 11/16, 13/16 and 1".
- 1 Sliding Bar—7" long.

For complete list of Drivers for use with these Socket Sets, see pages 98 and 99.

♦ REGISTERED TRADE MARK

DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' "SUPERSOCKET" WRENCH SETS
Selected Alloy Steel

STANDARD PATTERN

1/2" SQUARE DRIVE

SET No. S-1

Complete in Metal Case

12 Pieces

11 Sockets and 1 Attachment

Total Weight, 4-3/4 lbs.

2 Color Steel Case Only

2-1/8 x 3 x 12-1/2"

Weight, 1-5/8 lbs.



CONTENTS

**11 Standard "Supersockets" with 12-point openings—
3/8, 7/16, 1/2, 9/16, 19/32, 5/8, 11/16, 3/4,
25/32, 7/8 and 1".**

1 S-51 Reversible Ratchet, 10-1/2" long.



SET No. S-2

Complete in Metal Case

9 Pieces

8 Sockets and 1 Attachment

Total Weight, 5-1/8 lbs.

2 Color Steel Case Only

2-1/8 x 3 x 12-1/2"

Weight, 1-5/8 lbs.

CONTENTS

**8 Standard "Supersockets" with 12-point openings—1/2, 19/32,
11/16, 25/32, 7/8, 31/32, 1-1/16 and 1-1/4".**

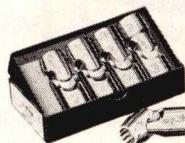
1 S-51—Reversible Ratchet, 10-1/2" long.

SET No. S-11

Complete in Cardboard Box

5 Pieces

Weight, 1-1/4 lbs.



CONTENTS

**5 Standard Universal "Supersockets" with 12-point
openings—1/2, 9/16, 5/8, 11/16 and 3/4".**

WILLIAMS' "SUPER SOCKET" WRENCH SETS
Selected Alloy Steel

STANDARD PATTERN

1/2" SQUARE DRIVE



SET No. S-3

Complete in Metal Case

10 Pieces

9 Sockets and 1 Attachment

Total Weight, 5-1/8 lbs.

2 Color Steel Case Only

2-1/8 x 3 x 12-1/2"

Weight, 1-5/8 lbs.

CONTENTS

9 Standard "Supersockets" with 12-point openings — 7/16, 1/2, 9/16, 5/8, 3/4, 7/8, 15/16, 1-1/16 and 1-1/4".

1 S-51 — Reversible Ratchet, 10-1/2" long.

SET No. S-4

Complete in Metal Case

20 Pieces

19 Sockets and 1 Attachment

Total Weight, 8-1/8 lbs.

2 Color Steel Case Only

2-1/8 x 3-3/4 x 12"

Weight, 1-7/8 lbs.



CONTENTS

19 Standard "Supersockets" with 12-point openings — 3/8, 7/16, 1/2, 9/16, 19/32, 5/8, 21/32, 11/16, 3/4, 25/32, 13/16, 7/8, 15/16, 31/32, 1, 1-1/16, 1-1/8, 1-3/16 and 1-1/4".

1 S-51 — Reversible Ratchet, 10-1/2" long.



SET No. S-12

Complete in Cardboard Box

15 Pieces

Weight, 2-3/4 lbs.

CONTENTS

15 Standard "Supersockets" with 6-point openings — 3/8, 7/16, 1/2, 9/16, *9/16 Ford Special, 19/32, 5/8, 21/32, 11/16, 3/4, 25/32, 13/16, 7/8, 15/16 and 1".

* All Ford 6, Ford-Mercury V-8, 85 HP, 90 HP and 100 HP Connecting Rods. Use with Torque wrench required on models having "Marsden" self-locking nuts. Not guaranteed because of extra thin walls.

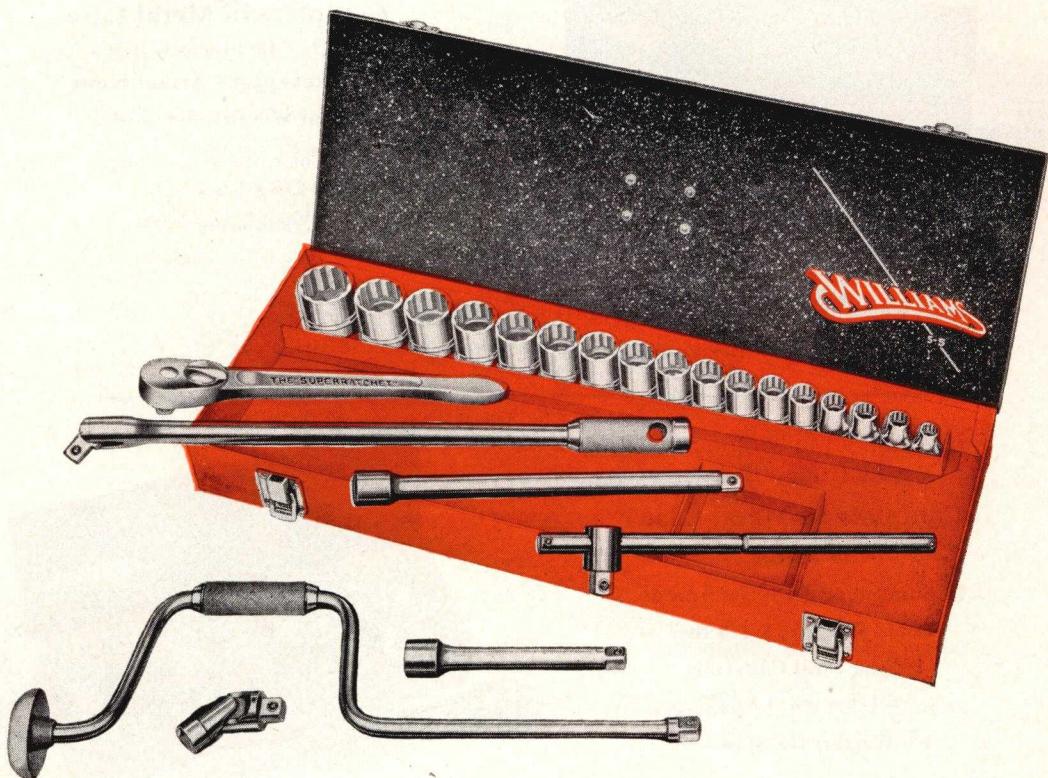
◆ REGISTERED TRADE MARK

WILLIAMS' ♦ "SUPER SOCKET" WRENCH SETS

Selected Alloy Steel

STANDARD PATTERN

1/2" SQUARE DRIVE



SET No. S-5

Complete in Metal Case

24 Pieces

17 Sockets and 7 Attachments

Total Weight, 18 lbs.

2 Color Steel Case Only

2-1/4 x 7-1/2 x 20-3/4"

Weight, 6 lbs.

C O N T E N T S

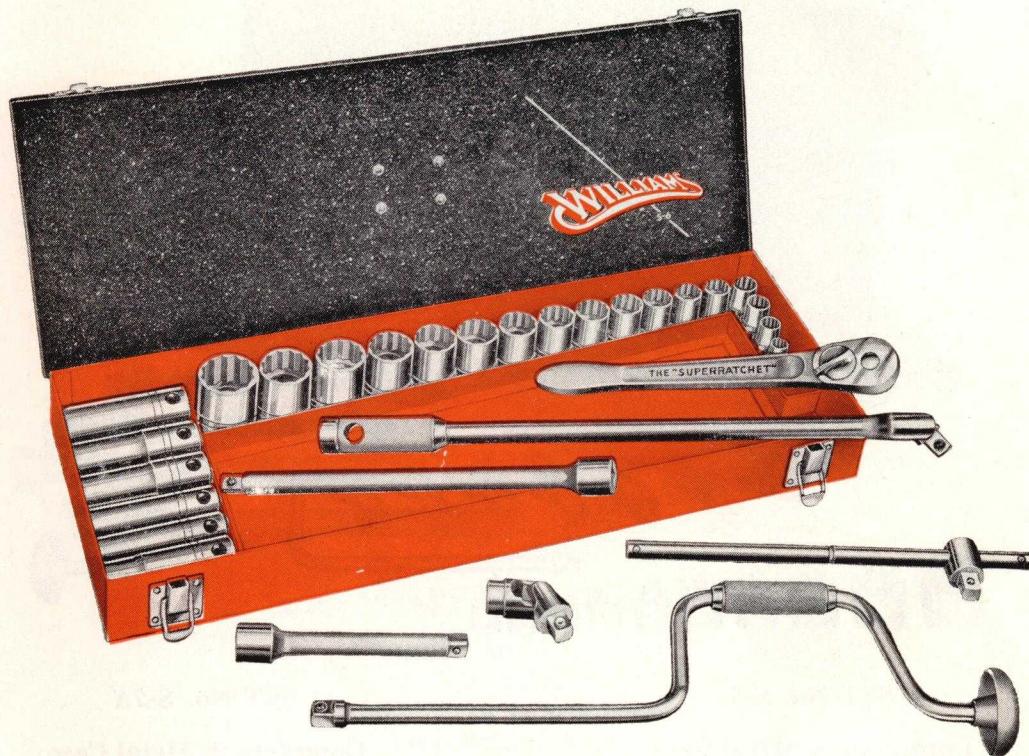
- 17 Standard "Supersockets"—12-point openings
—3/8, 7/16, 1/2, 9/16, 19/32, 5/8, 11/16, 3/4,
25/32, 13/16, 7/8, 15/16, 31/32, 1, 1-1/16,
1-1/8 and 1-1/4".
- 1 S-15—Speeder, 17-1/2" long, revolving grips.
- 1 S-20A—Sliding T Handle, 11" long.

- 1 S-41—Flex Handle, 17-1/4" long.
- 1 S-51—Reversible Ratchet, 10-1/2" long.
- 1 S-110P—Extension Bar, 5-1/2" long.
- 1 S-115P—Extension Bar, 10-1/2" long.
- 1 S-140—Universal Joint, range approx. 140°.

WILLIAMS' ♦ "SUPER SOCKET" WRENCH SETS
Selected Alloy Steel

STANDARD PATTERN

1/2" SQUARE DRIVE



SET No. S-6

Complete in Metal Case

30 Pieces

23 Sockets and 7 Attachments

Total Weight, 20-1/4 lbs.

2 Color Steel Case Only

2-1/4 x 7-1/2 x 20-3/4"

Weight, 6 lbs.

C O N T E N T S

17	Standard "Supersockets" —12-point openings —3/8, 7/16, 1/2, 9/16, 19/32, 5/8, 11/16, 3/4, 25/32, 13/16, 7/8, 15/16, 31/32, 1, 1-1/16, 1-1/8 and 1-1/4".	1	S-20A —Sliding T Handle, 11" long.
6	Standard Extra Deep "Supersockets" —12- point openings—9/16, 5/8, 11/16, 13/16, 7/8 and 1".	1	S-41 —Flex Handle, 17-1/4" long.
1	S-15 —Speeder, 17-1/2" long, revolving grips.	1	S-51 —Reversible Ratchet, 10-1/2" long.
		1	S-110P —Extension Bar, 5-1/2" long.
		1	S-115P —Extension Bar, 10-1/2" long.
		1	S-140 —Universal Joint, range approx. 140°.

♦ REGISTERED TRADE MARK

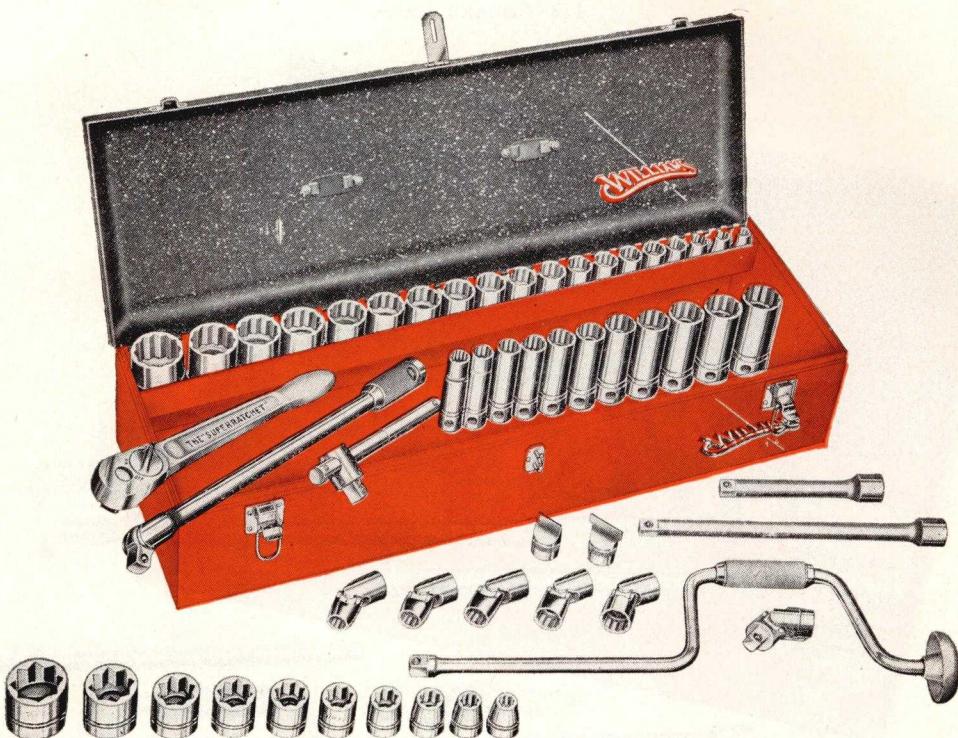
DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPERSOCKET" WRENCH SETS
Selected Alloy Steel

STANDARD PATTERN

1/2" SQUARE DRIVE



SET No. S-7

Complete in Metal Case

44 Pieces

35 Sockets and 9 Attachments

Total Weight, 27 lbs.

2 Color Steel Case Only

5-3/8 x 7-1/2 x 23-1/4"

Weight, 8-5/8 lbs.

SET No. S-7A

Complete in Metal Case

54 Pieces

45 Sockets and 9 Attachments

Total Weight, 30 lbs.

2 Color Steel Case Only

5-3/8 x 7-1/2 x 23-1/4"

Weight, 8-7/8 lbs.

C O N T E N T S

- 19** **Standard "Supersockets"** with 12-point openings— $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{19}{32}$, $\frac{5}{8}$, $\frac{21}{32}$, $\frac{11}{16}$, $\frac{3}{4}$, $\frac{25}{32}$, $\frac{13}{16}$, $\frac{7}{8}$, $\frac{15}{16}$, $\frac{31}{32}$, $1\frac{1}{16}$, $1\frac{1}{8}$, $1\frac{3}{16}$ and $1\frac{1}{4}$.
- *10** **Standard "Supersockets"** 8-point openings, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$, $\frac{3}{4}$, $\frac{7}{8}$ and $1\frac{1}{8}$.
- 5** **Standard Universal "Supersockets"** with 12-point openings— $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$ and $\frac{3}{4}$.
- 11** **Standard Extra Deep "Supersockets"** with 12-point openings— $\frac{1}{2}$, $\frac{9}{16}$, $\frac{5}{8}$, $\frac{11}{16}$, $\frac{3}{4}$, $\frac{13}{16}$, $\frac{7}{8}$, $\frac{15}{16}$, 1 , $1\frac{1}{16}$ and $1\frac{1}{8}$.

* Not included in Set No. S-7.

- 1** **S-15**—Speeder, $17\frac{1}{2}$ " long, revolving grips.
- 1** **S-20A**—Sliding T Handle, $11\frac{1}{2}$ " long.
- 1** **S-41**—Flex Handle, $17\frac{1}{4}$ " long.
- 1** **S-51**—Reversible Ratchet, $10\frac{1}{2}$ " long.
- 1** **S-110P**—Extension Bar, $5\frac{1}{2}$ " long.
- 1** **S-115P**—Extension Bar, $10\frac{1}{2}$ " long.
- 1** **S-140**—Universal Joint, range approx. 140° .
- 1** **SB-30**—Drag Link Socket Bit, $15/16$ " blade.
- 1** **SB-40**—Drag Link Socket Bit, $1\frac{1}{4}$ " blade.

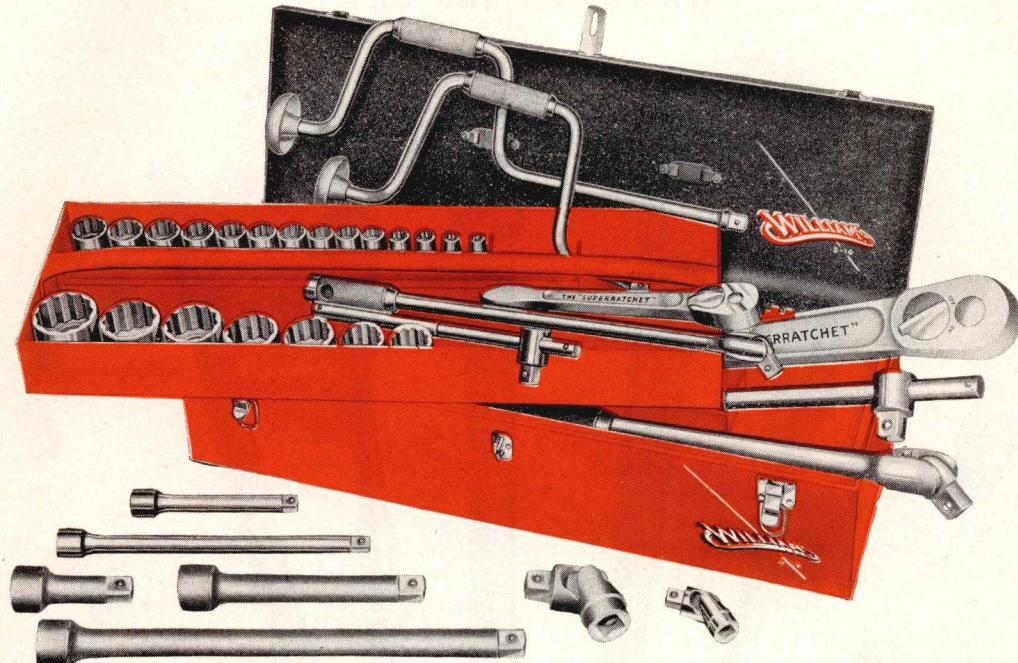
♦ REGISTERED TRADE MARK

5-52

WILLIAMS' ♦ "SUPER SOCKET" WRENCH SETS
Selected Alloy Steel

STANDARD AND HEAVY DUTY PATTERNS

1/2" AND 3/4" SQUARE DRIVE



SET No. S-10

Complete in Metal Case

36 Pieces

21 Sockets and 15 Attachments

Total Weight, 50 lbs.

2 Color Steel Case Only

6-3/4 x 7-1/2 x 23-1/4"

Weight, 12-3/8 lbs.

C O N T E N T S

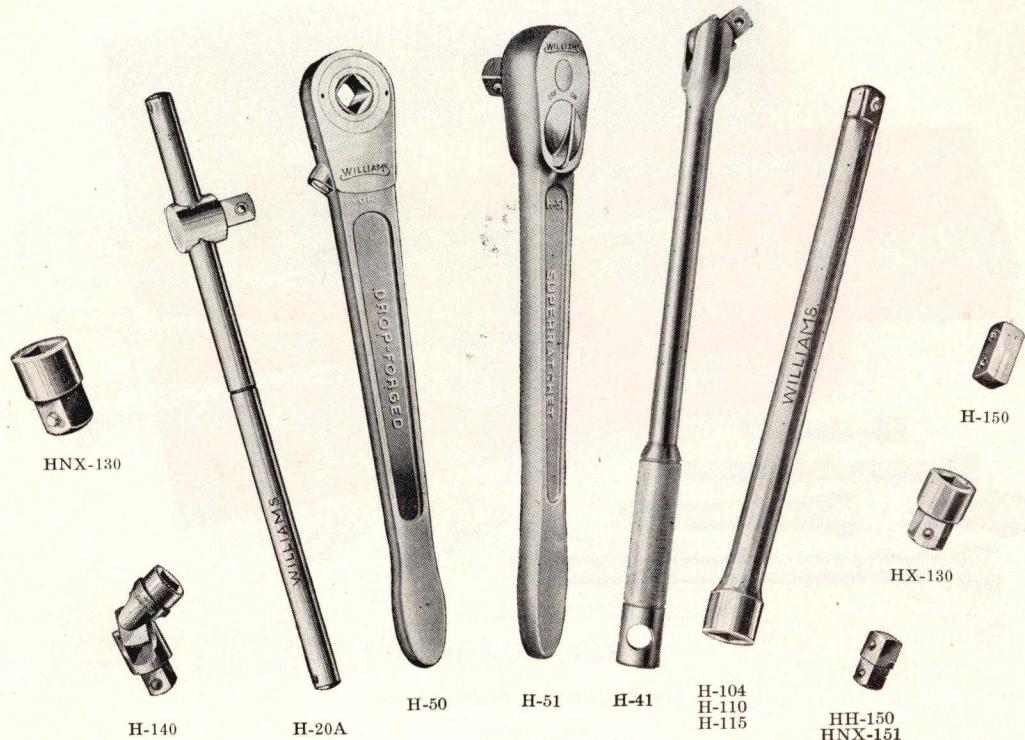
14	Standard "Supersockets" with 12-point openings— $3/8$, $7/16$, $1/2$, $9/16$, $19/32$, $5/8$, $11/16$, $3/4$, $25/32$, $13/16$, $7/8$, $15/16$, $31/32$ and $1"$.	1	S-110P—Extension Bar, $5-1/2"$ long.
7	Heavy Duty "Supersockets"—12-pt. openings— $1-1/16$, $1-1/8$, $1-1/4$, $1-5/16$, $1-7/16$, $1-1/2$ and $1-5/8"$.	1	S-115P—Extension Bar, $10-1/2"$ long.
1	S-10—Speeder, 12" long, revolving grips.	1	S-140—Universal Joint, range approx. 140° .
1	S-15—Speeder, 17-1/2" long, revolving grips.	1	H-20A—Sliding T Handle, $17-1/2"$ long.
1	S-20A—Sliding T Handle, 11" long.	1	H-41—Flex Handle, 20" long.
1	S-41—Flex Handle, $17-1/4"$ long.	1	H-51—Reversible Ratchet, 19" long.
1	S-51—Reversible Ratchet, $10-1/2"$ long.	1	H-104—Extension Bar, 4" long.

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "SUPER SOCKET" WRENCHES
Selected Alloy Steel

HEAVY DUTY PATTERN— $\frac{3}{4}$ " SQUARE DRIVE

H A N D L E S a n d P A R T S



No.	PI E C E	Weight Ea., Lbs.	No.
H-20A	Sliding T Handle—17-1/2" long.....	2.7	H-20A
H-41	Flex Handle—20" long; flexible head, knurled grip and cross hole for Sliding Bar	4.6	H-41
H-41B	Sliding Bar, $\frac{3}{4}$ " x 16" for H-41 and NX-41.....	2.	H-41B
H-50	Ratchet—18-1/2" long; complete with Plug-Connector H-150.....	5.3	H-50
H-51	Reversible Ratchet—19" long, 24 teeth in Ratchet gear instead of usual 16, Shift lever reverses action instantly.....	5.4	H-51
H-104	Extension Bar—4" long.....	.88	H-104
H-110	Extension Bar—8" long.....	1.5	H-110
H-115	Extension Bar—15-1/2" long.....	2.8	H-115
HNX-130	Adapter, $\frac{3}{4}$ " square female and 1" square male—Adapts Heavy Duty Handles ($\frac{3}{4}$ " square male drive) to Extra Heavy Duty Sockets (1" square female drive).....	1.7	HNX-130
NX-130	Adapter, $\frac{3}{4}$ " square female and 1" hex male—Adapts Heavy Duty Handles ($\frac{3}{4}$ " square male drive) to old style Extra Heavy Duty Sockets (1" hex female drive).....	.59	NX-130
H-140	Universal Joint—Fitted with spring tension to maintain operating angle desired—range approx. 140°.....	1.2	H-140
H-150	Ratchet Plug-Connector.....	.27	H-150
HH-150	Plug-Adapter, $\frac{5}{8}$ " and $\frac{3}{4}$ " square male.....	.2	HH-150
HNX-151	Adapter, $\frac{3}{4}$ " square male and 1" square male—Adapts Extra Heavy Duty Sockets (1" square female drive) to Heavy Duty Handles ($\frac{3}{4}$ " square female drive).....	.44	HNX-151

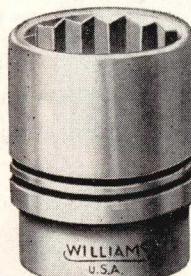
♦ REGISTERED TRADE MARK

1-52

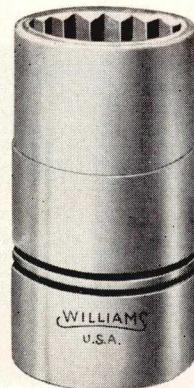
WILLIAMS' ♦ "SUPER SOCKET" WRENCHES
Selected Alloy Steel

HEAVY DUTY PATTERN — 3/4" SQUARE DRIVE

S O C K E T S



**Regular
12-Point Opening**



**Extra Deep
12-Point Opening**

Williams' Heavy Duty Sockets are designed for harder service where more strength is required than on the every-day job. They provide ample strength without clumsy bulk. Will rotate nuts completely where handle can be swung only 30°.

Extra Deep Sockets are specially designed for U-bolt nuts on Buses and Trucks and other HEAVY service requiring an extra deep opening. Ample strength for the hardest jobs. Indispensable in cramped spaces.

Made from Selected Alloy Steel heat-treated, and chrome-plated. Regular sockets packed 2 in a box. Extra Deep Sockets, packed 3 in a box.

To use "Heavy Duty" Sockets (3/4" square female drive) with "Standard" Handles (1/2" square male drive), use Adapter SH-130, page 99.

Size Opening	REGULAR		*EXTRA DEEP		Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex. Head Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGULAR Nut
	No.	Weight Each, Lbs.	No.	Weight Each, Lbs.				
7/8	H-1228	.41			1/2	5/8	9/16	9/16
15/16	H-1230	.41	HD-1230	.75	9/16		5/8	
31/32	H-1231	.43						
1	H-1232	.50						
1- 1/16	H-1234	.51	HD-1234	.9	5/8	3/4	3/4	5/8
1- 1/8	H-1236	.58				7/8		3/4
1- 3/16	H-1238	.69						
1- 1/4	H-1240	.67	HD-1240	1.2	3/4	1	7/8	
1- 5/16	H-1242	.78						7/8
1- 3/8	H-1244	.78						
1- 7/16	H-1246	.88	HD-1246	1.6	7/8		1	
1- 1/2	H-1248	1.				1-1/8		1
1- 5/8	H-1252	1.			1		1-1/8	
1-11/16	H-1254	1.3				1-1/4		1-1/8
1- 3/4	H-1256	1.3						
1-13/16	H-1258	1.9			1-1/8		1-1/4	
1- 7/8	H-1260	1.9						1-1/4
2	H-1264	2.1			1-1/4		1-3/8	
2- 1/16	H-1266	2.5						1-3/8
2- 1/8	H-1268	2.6						
2- 3/16	H-1270	2.6			1-3/8		1-1/2	
2- 1/4	H-1272	2.5						1-1/2

♦ REGISTERED TRADE MARK

* 3-1/4" to 3-1/2" long.

DROP-FORGINGS AND

WILLIAMS

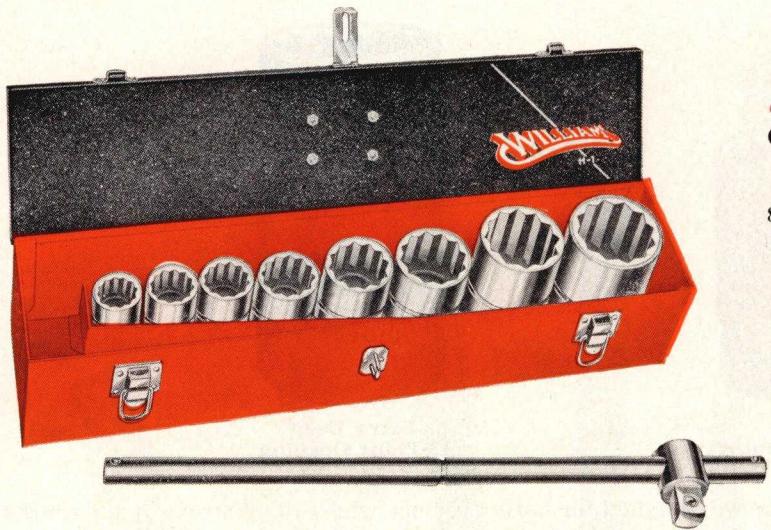
DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPERSOCKET" WRENCH SETS

Selected Alloy Steel

HEAVY DUTY PATTERN

3/4" SQUARE DRIVE



SET No. H-1

Complete in Metal Case

9 Pieces

8 Sockets and 1 Attachment

Total Weight, 14-7/8 lbs.

2 Color Steel Case Only

5-3/8 x 4 x 18"

Weight, 4-1/2 lbs.

CONTENTS

8 Heavy Duty "Supersockets" with 12-point openings — 7/8, 31/32, 1-1/16, 1-1/4, 1-7/16 1-5/8, 1-13/16 and 2".

1 H-20A — Sliding T Handle — 17-1/2" long.



SET No. H-2

Complete in Metal Case

13 Pieces

10 Sockets and 3 Attachments

Total Weight, 20-3/4 lbs.

2 Color Steel Case Only

2-3/4 x 4-1/2 x 19-3/4"

Weight, 4-3/4 lbs.

CONTENTS

10 Heavy Duty "Supersockets" with 12-point openings — 1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-5/8 and 1-3/4".

1 H-20A — Sliding T Handle, 17-1/2" long.

1 H-110 — Extension Bar, 8" long.

1 H-115 — Extension Bar, 15-1/2" long.

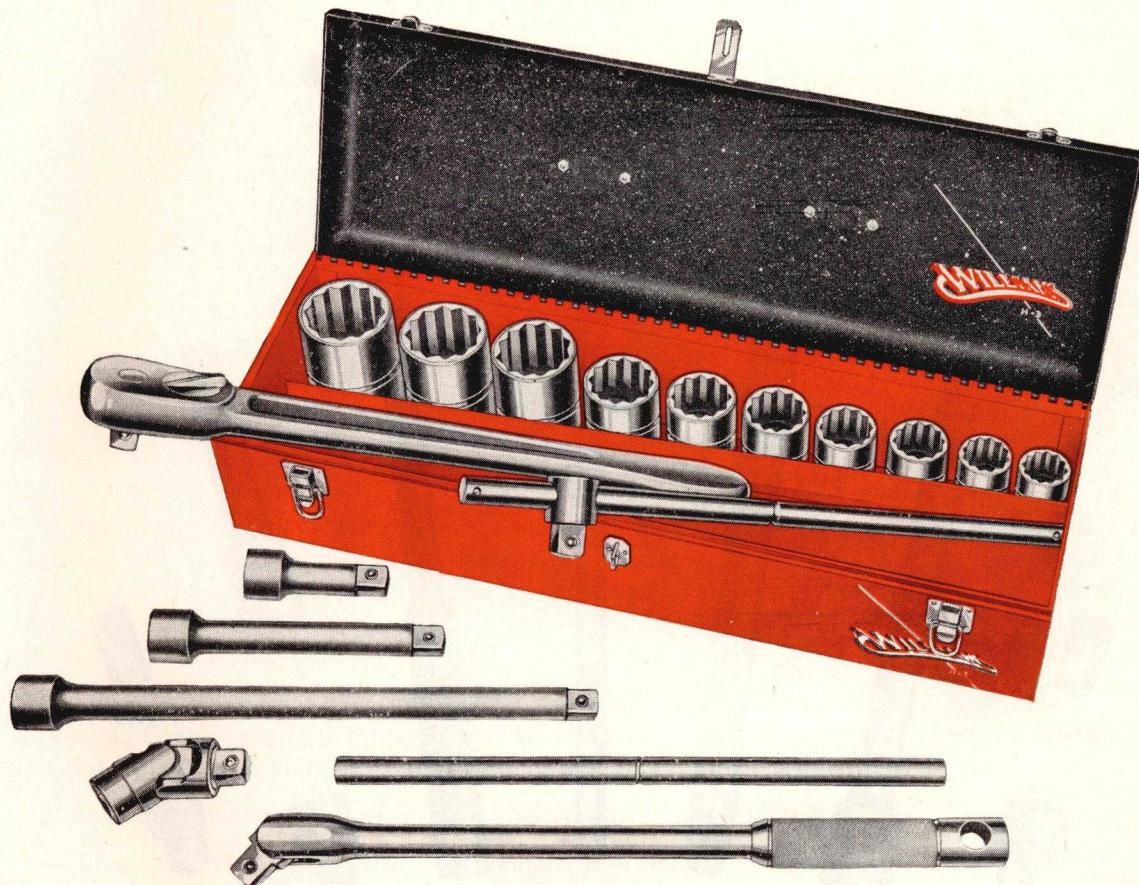
♦ REGISTERED TRADE MARK

1-52

WILLIAMS' ♦ "SUPER SOCKET" WRENCH SETS

Selected Alloy Steel
HEAVY DUTY PATTERN

3/4" SQUARE DRIVE



SET No. H-3

Complete in Metal Case

18 Pieces

10 Sockets and 8 Attachments

Total Weight, 41-1/8 lbs.

2 Color Steel Case Only

5-3/8 x 7-1/2 x 23-1/4"

Weight, 7-1/2 lbs.

C O N T E N T S

10 Heavy Duty "Supersockets" with 12-point openings— $1\frac{1}{16}$, $1\frac{1}{8}$, $1\frac{1}{4}$, $1\frac{5}{16}$, $1\frac{7}{16}$, $1\frac{1}{2}$, $1\frac{5}{8}$, $1\frac{13}{16}$, $1\frac{7}{8}$ and 2".	1 H-51—Reversible Ratchet, 19" long.
1 H-20A—Sliding T Handle, 17/12" long.	1 H-104—Extension Bar, 4" long.
1 H-41—Flex Handle, 20" long.	1 H-110—Extension Bar, 8" long.
1 H-41B—Sliding Bar for H-41.	1 H-115—Extension Bar, 15-1/2" long.
	1 H-140—Universal Joint, range approx. 140°.

♦ REGISTERED TRADE MARK

DROP-FORGINGS AND

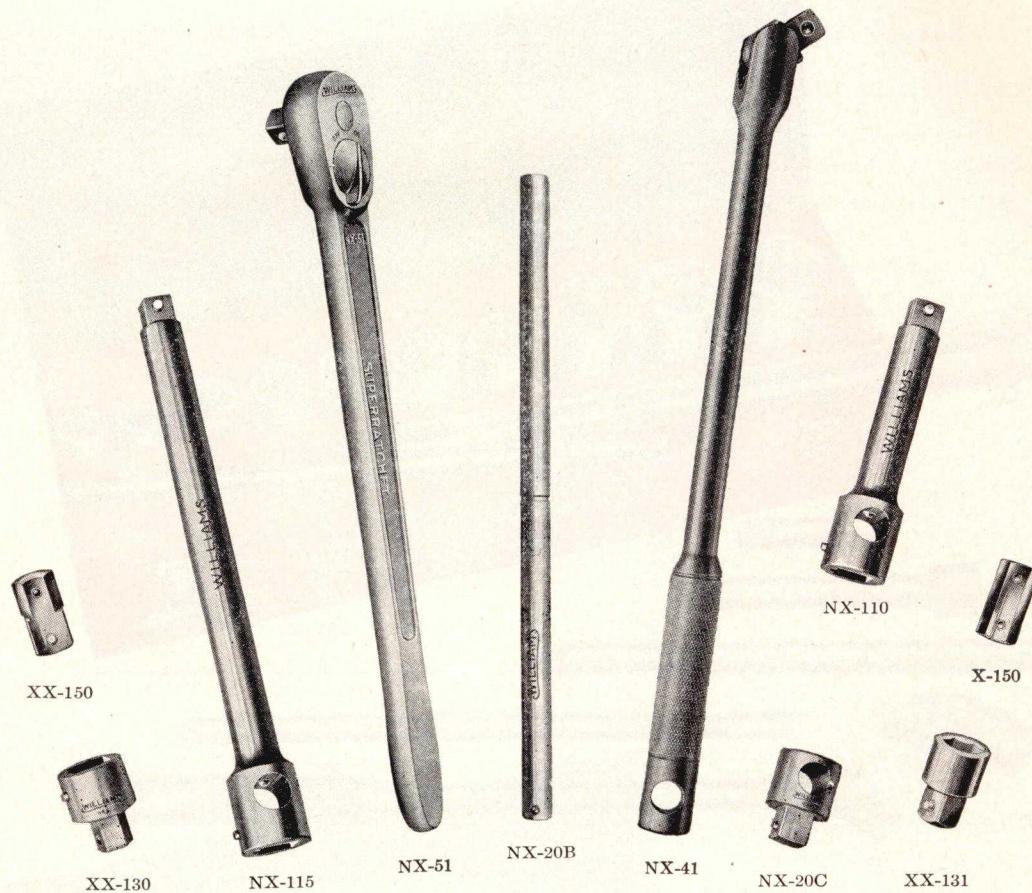
WILLIAMS DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPER SOCKET" WRENCHES
Selected Alloy Steel

EXTRA HEAVY DUTY PATTERN

1" SQUARE DRIVE

HANDLES and PARTS



No.	PI E C E	Weight Each, Lbs.	No.
NX-20B	Sliding Handle — 1" diam., 20" long.....	4.4	NX-20B
NX-20C	Adapter — for Sliding Handle NX-20B.....	1.4	NX-20C
NX-41	Flex Handle 27" long; flexible head, knurled grip and cross-hole for Sliding Bar H-41B, Page 108.....	9.3	NX-41
NX-51	Reversible Ratchet — 25" long, 24 teeth in Ratchet gear instead of usual 16. Shift lever reverses action instantly.....	11.5	NX-51
NX-110	Extension Bar — 9" long.....	3.7	NX-110
NX-115	Extension Bar — 18" long.....	7.1	NX-115
X-150	Ratchet Plug-Connector — 1" hex.....	.54	X-150
XX-130	Adapter — 1" square Female and 1" hex Male.....	1.2	XX-130
XX-131	Adapter — 1" hex Female and 1" square Male.....	.93	XX-131
XX-150	Adapter — 1" square Male and 1" hex Male.....	.53	XX-150

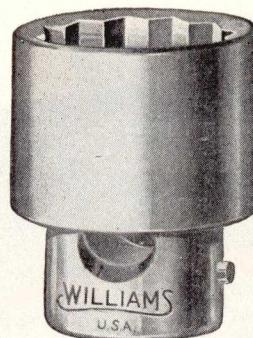
♦ REGISTERED TRADE MARK

1-52

WILLIAMS' ♦ "SUPERSOCKET" WRENCHES
Selected Alloy Steel

EXTRA HEAVY DUTY PATTERN
 1" SQUARE DRIVE

SOCKETS



12-Point Opening

Williams' Extra Heavy Duty Sockets provide sturdy, rugged strength for the hardest kind of service. In addition to the 1" square drive opening in their base, they are cross-drilled to receive the Sliding Handle which is thus brought close to the work. This minimizes the tendency to tip when the socket is used near the end of the handle. Will rotate nuts completely where the handle can be swung only 30°.

Another feature is the "Lock-Socket" device which provides a positive lock between the sockets and attachments. To release the "Lock-Socket" simply press the button on the socket and pull. This device eliminates all danger of sockets becoming detached in service.

Made from Selected Alloy Steel, heat-treated and Chrome-plated.

Sockets Nos. NX-1234 to NX-1248 packed 2 in a box. All others, 1 in a box.

Nominal Open- ing	No.	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Am.Std. HexHd. Cap Screw; Diam. Screw	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. Reg. Nut; Size Bolt	Wgt. Each Lbs.	Nom- inal Open- ing	No.	Amer. Std. HEAVY Nut (U.S.S.); Size Bolt	Amer. Std. LIGHT Nut (S.A.E.); Size Bolt	Amer. Std. Reg. Nut; Size Bolt	Wgt. Each Lbs.
1 1/16	NX-1234	5/8	.....	3/4	.....	1.1	2 1/8	NX-1268	.....	.....	.....	3.
1 1/8	NX-1236	.....	7/8	.....	3/4	1.2	2 3/16	NX-1270	1-3/8	1-1/2	.....	3.
1 1/4	NX-1240	3/4	.....	7/8	.....	1.2	2 1/4	NX-1272	.....	.....	1-1/2	3.3
1 3/8	NX-1244	.....	.....	.....	.....	1.3	2 3/8	NX-1276	1-1/2	.....	.....	3.6
1 7/16	NX-1246	7/8	.....	1	.....	1.3	2 1/2	NX-1280	.....	.....	.....	3.2
1 1/2	NX-1248	.....	1-1/8	.....	1	1.4	2 9/16	[†] NX-1282	1-5/8	.....	.....	6.3
1 5/8	NX-1252	1	.....	1-1/8	.....	1.9	2 5/8	[†] NX-1284	.....	.....	1-3/4	6.3
1 13/16	NX-1258	1-1/8	.....	1-1/4	.....	2.1	2 3/4	[†] NX-1288	1-3/4	.....	.....	6.7
1 7/8	NX-1260	.....	.....	.....	1-1/4	2.3	2 15/16	[†] NX-1294	1-7/8	.....	.....	7.2
2	NX-1264	1-1/4	.....	1-3/8	.....	2.4	3 1/8	[†] NX-12100	2	.....	.....	8.3

† These Sockets have short neck, no cross-hole.

♦ REGISTERED TRADE MARK

DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPER SOCKET" WRENCH SETS
Selected Alloy Steel

EXTRA HEAVY DUTY PATTERN

1" SQUARE DRIVE



SET No. NX-1

Complete in Metal Case

18 Pieces

12 Sockets and 6 Attachments

Total Weight, 78-3/4 lbs.

2 Color Steel Case Only

4-1/4 x 8 x 29-1/4"

Weight, 17 lbs.

CONTENTS

12 Extra Heavy Duty "Supersockets" with 12-point openings — 1-1/6, 1-1/8, 1-1/4, 1-7/16, 1-1/2, 1-5/8, 1-13/16, 1-7/8, 2-3/16, 2-1/4 and 2-3/8".	1 NX-41 — Flex Handle, 27" long.
1 NX-20B — Sliding Handle—1" diameter, 20" long.	1 NX-51 — Reversible Ratchet, 25" long.
1 NX-20C —Adapter for Sliding Handle, NX-20B.	1 NX-110 — Extension Bar, 9" long.
	1 NX-115 — Extension Bar 18" long.

♦ REGISTERED TRADE MARK

1-52

WILLIAMS' "SUPERSOCKET" WRENCH SETS

Selected Alloy Steel

EXTRA HEAVY DUTY PATTERN

1" SQUARE DRIVE

SET No. NX-2

Complete in Metal Case

10 Pieces

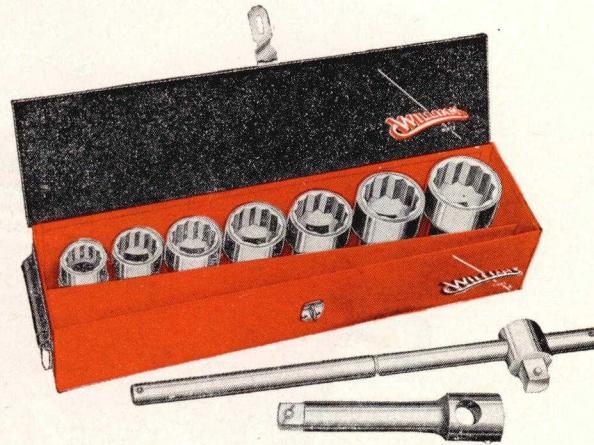
7 Sockets and 3 Attachments

Total Weight, 35-1/8 lbs.

2 Color Steel Case Only

4-1/4 x 5-1/4 x 20-3/4"

Weight, 10-1/8 lbs.



CONTENTS

7 Extra Heavy Duty "Supersockets" with
12-point openings—1-1/4, 1-7/16, 1-5/8, 1-13/16,
2, 2-3/16 and 2-3/8".

1 NX-20B — Sliding Handle — 1" diameter, 20" long.

1 NX-20C — Adapter for Sliding Handle NX-20B.

1 NX-110 — Extension Bar, 9" long.

SET No. NX-3

Complete in Metal Case

12 Pieces

7 Sockets and 5 Attachments

Total Weight, 57-1/4 lbs.

2 Color Steel Case Only

4-1/4 x 6-1/2 x 26"

Weight, 13-1/2 lbs.



CONTENTS

7 Extra Heavy Duty "Supersockets" with
12-point openings—1-1/4, 1-7/16, 1-5/8, 1-13/16,
2, 2-3/16 and 2-3/8".

1 NX-20B — Sliding Handle — 1" diameter, 20" long.

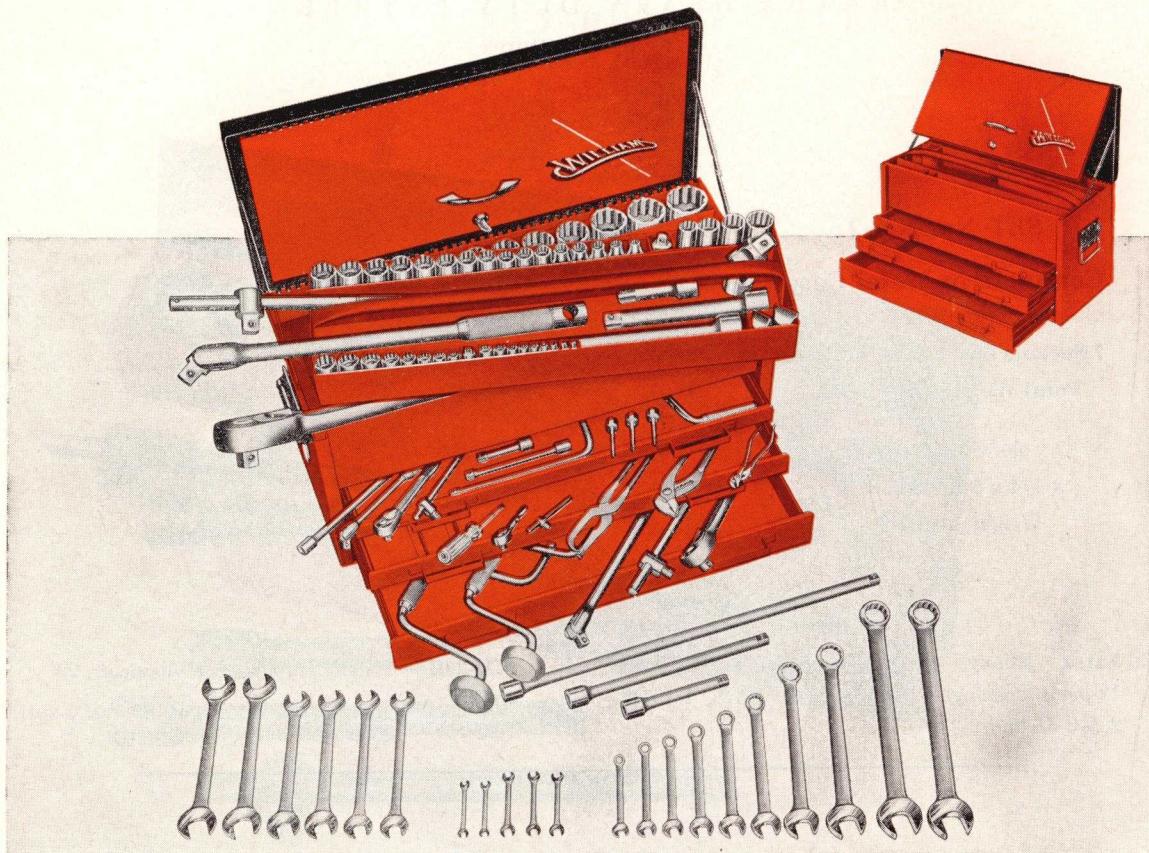
1 NX-20C — Adapter for Sliding Handle, NX-20B.

1 NX-51 — Reversible Ratchet, 25" long.

1 NX-110 — Extension Bar, 9" long.

1 NX-115 — Extension Bar, 18" long.

WILLIAMS' "SUPERCHEST" No. 1001
Selected Alloy Steel



Complete in Metal Chest

100 Pieces

44 Sockets, 32 Attachments and 24 Wrenches, etc.

Total Weight, 90-1/2 lbs.

2 Color Steel Chest Only

10-1/4 x 12 x 23-1/2"

Weight, 36 lbs.

The Williams' 1001 "Superchest" provides a scientifically matched assortment of wrenches in numerous patterns and detachable sockets with accessories in 1/4, 3/8, 1/2 and 3/4" drives that will meet every conceivable nut turning problem of the Machinist or Master Mechanic.

This smartly designed "Superchest" is constructed of heavy gauge steel adequately reinforced and welded. It is built to last a lifetime.

Drawers with handy compartments operate on free acting suspension slides. Removable "tote" tray gives

easy access to the roomy interior and has convenient compartments which keep sockets at proper height within easy finger-tip reach. Heavy duty handles provide for transportation. A cylinder lock on the hinged front panel securely locks entire chest.

(Contents listed on following page)

1-52

WILLIAMS' "SUPERCHEST" No. 1001

CONTENTS

"SUPERSOCKETS"						SOCKET ATTACHMENTS, WRENCHES, PLIERS	
Nominal Opening	No.	Amer. Std. HEAVY Nut (U.S.S.)	Amer. Std. Hex. Hd. Cap Screw	Amer. Std. LIGHT Nut (S.A.E.)	Amer. Std. REGULAR Nut	No.	Piece
MIDGET PATTERN 1/4" Square Drive REGULAR 6-POINT							
3/16	NM-606	.....	.....	.....	.....	*No. 2 & 3	
7/32	NM-607	.....	.....	.....	.....
1/4	NM-608	.....	.....	.....	.....	*4	
9/32	NM-609	.....	.....	.....	.....
REGULAR 12-POINT							
5/16	NM-1210	1/8	1/8	.....	.....	*5 & 6	
11/32	NM-1211	.....	.....	.....	.....	*8	
3/8	NM-1212	.....	3/16	.....	.....	*10	
7/16	NM-1214	.....	1/4	1/4	.....	*12 & 1/4	
1/2	NM-1216	1/4	5/16	5/16	.....	
BANTAM PATTERN 3/8" Square Drive REGULAR 12-POINT							
3/8	B-1212	.....	3/16	.....	.....	*No. 10	
7/16	B-1214	.....	1/4	1/4	.....	1/4	
1/2	B-1216	1/4	5/16	5/16	.....	
9/16	B-1218	.....	3/8	3/8	.....	5/16	
5/8	B-1220	.....	7/16	7/16	.....	3/8	
11/16	B-1222	3/8	7/16	7/16	.....	
3/4	B-1224	.....	1/2	1/2	.....	7/16	
EXTRA DEEP 12-POINT							
13/16	BD-1226	.....	9/16	.....	1/2		
STANDARD PATTERN 1/2" Square Drive REGULAR 12-POINT							
3/8	ST-1212	.....	3/16	1/4	1/4		
7/16	ST-1214	.....	1/4	1/4	1/4		
1/2	ST-1216	1/4	5/16	5/16	5/16		
9/16	ST-1218	.....	3/8	3/8	3/8		
9/16	ST-1218	.....	3/8	3/8	5/16		
19/32	ST-1219	5/16	7/16	7/16	7/16		
5/8	ST-1220	.....	7/16	7/16	3/8		
21/32	ST-1221	.....	7/16	7/16	3/8		
11/16	ST-1222	3/8	7/16	7/16	3/8		
3/4	ST-1224	.....	1/2	1/2	7/16		
25/32	ST-1225	7/16	9/16	9/16	9/16		
13/16	ST-1226	.....	9/16	9/16	1/2		
7/8	ST-1228	1/2	5/8	9/16	9/16		
15/16	ST-1230	9/16	5/8	5/8	5/8		
31/32	ST-1231	.....	3/4	.....	5/8		
1	ST-1232	.....	3/4	.....	5/8		
EXTRA DEEP 12-POINT							
11/16	SD-1222	3/8	9/16	.....	1/2		
13/16	SD-1226	.....	9/16	.....	1/2		
7/8	SD-1228T	.....	3/4	.....	5/8		
1	SD-1232	.....	3/4	.....	5/8		
DRAG LINK SOCKET BITS							
15/16	SB-30	Size Blade—7/64 x 15/16"	.....	.....	.....
1-1/4	SB-40	Size Blade—3/32 x 1-1/4"	.....	.....	.....
HEAVY DUTY PATTERN 3/4" Square Drive REGULAR 12-POINT							
1-1/16	H-1234	5/8	7/8	3/4	3/4		
1-1/8	H-1236	3/4	7/8	7/8	7/8		
1-1/4	H-1240	.....	1	7/8	7/8		
1-5/16	H-1242	.....	1	7/8	7/8		
1-7/16	H-1246	7/8	1-1/8	1	1		
1-1/2	H-1248	1	1-1/8	1-1/8	1		
1-5/8	H-1252	1	1	1-1/8	1-1/8		
"SUPERPLIERS"							
1517	Pliers, 13"; for brake-shoe springs	.....	.....	.....	.....
1519	Midget, 4-1/2"; 4-position slip-joint plier	.....	.....	.....	.....
1520	Standard, 9-1/2"; 8-position slip-joint	.....	.....	.....	.....

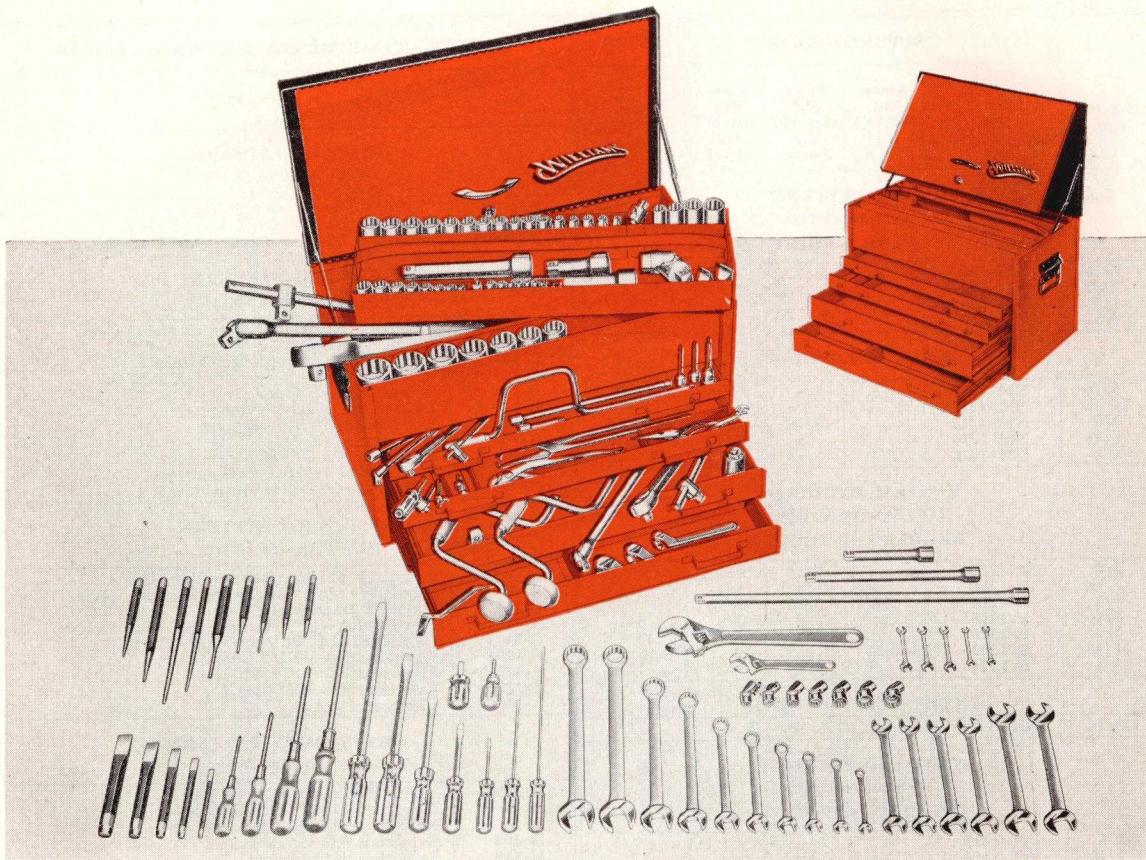
* Machine Screw Nut.

DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' "SUPERCHEST" No. 2001
Selected Alloy Steel



Complete in Metal Chest

146 Pieces

51 Sockets, 37 Attachments and 58 Wrenches, etc.

Total Weight, 118-1/2 lbs.

2 Color Steel Chest Only

12-5/8 x 15-1/8 x 23-1/2"

Weight, 51 lbs.

Williams' 2001 "Superchest" is a superbly complete set of tools—a miniature tool room. A wide range of "Supersockets" with Attachments in 1/4, 3/8, 1/2 and 3/4" drives gives the operator an extremely flexible wrench system. Additional "Superrenches," pliers, chisels, screwdrivers, etc. make this set remarkably versatile.

This smartly designed "Superchest" is constructed of heavy gauge steel adequately reinforced and welded. It is built to last a lifetime.

Drawers with handy compartments operate on free acting suspension slides. Removable "tote"

tray gives easy access to the roomy interior and has convenient compartments which keep sockets at proper height within easy finger-tip reach. Heavy duty handles provide for transportation. A cylinder lock on the hinged front panel securely locks entire chest.

(Contents listed on following page)

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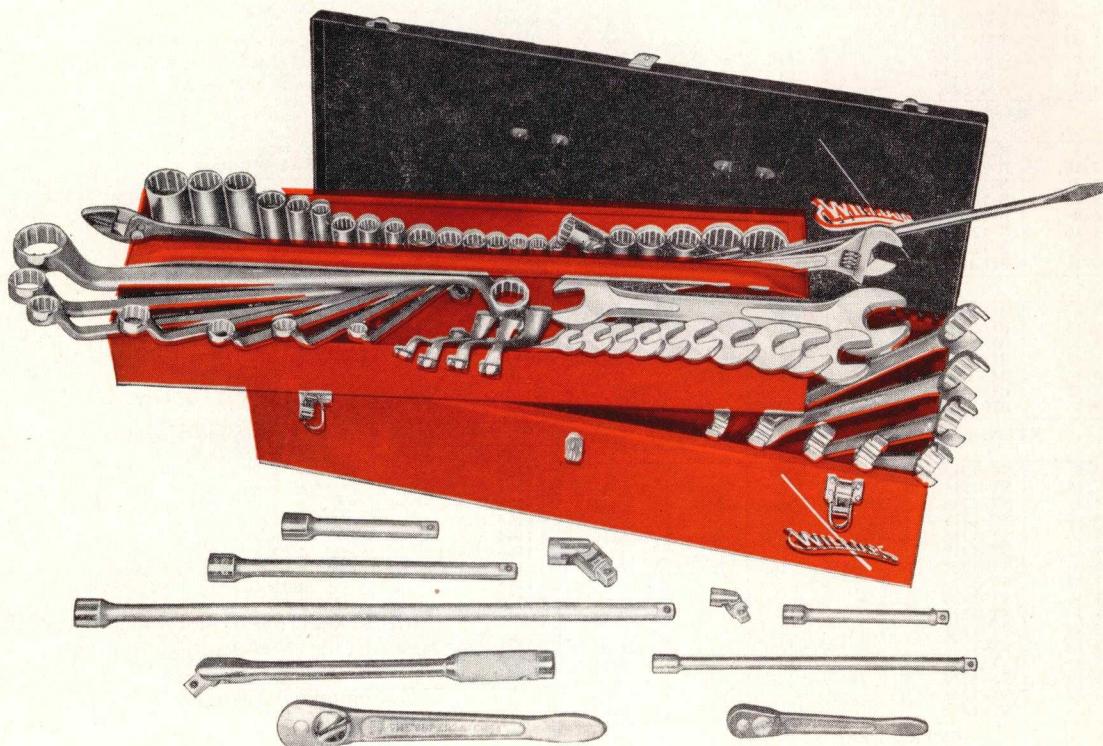
DROP-FORGINGS AND WILLIAMS DROP-FORGED TOOLS

WILLIAMS' "SUPER CHEST" No. 2001
CONTENTS

"SUPERSOCKETS"						
Nominal Opening	No.	U. S. Std. Nut	Hex Cap Screw	S.A.E. Std. Nut	Amer. Std. REGULAR Nut	
MIDGET PATTERN—1/4" Square Drive REGULAR 6-POINT						
3/16	NM-606					*No. 2 & 3
7/32	NM-607					
1/4	NM-608					*4
9/32	NM-609					
REGULAR 12-POINT						
5/16	NM-1210	1/8	1/8			*5 & 6
11/32	NM-1211					*8
3/8	NM-1212		3/16			*10
7/16	NM-1214		1/4	1/4		*12 & 1/4
1/2	NM-1216	1/4	5/16	5/16		
BANTAM PATTERN—3/8" Square Drive REGULAR 12-POINT						
3/8	B-1212		3/16			*No. 10
7/16	B-1214		1/4	1/4		
1/2	B-1216	1/4	5/16	5/16		
9/16	B-1218		3/8	3/8	5/16	
5/8	B-1220		7/16	7/16	3/8	
11/16	B-1222	3/8				
3/4	B-1224		1/2	1/2	7/16	
†13/16	BD-1226		9/16		1/2	
UNIVERSAL 12-POINT						
3/8	BU-1212		3/16			*10
7/16	BU-1214		1/4	1/4		*12 & 1/4
1/2	BU-1216	1/4	5/16	5/16		
9/16	BU-1218		3/8	3/8	5/16	
5/8	BU-1220		7/16	7/16	3/8	
11/16	BU-1222	3/8				
3/4	BU-1224		1/2	1/2	7/16	
25/32	BU-1225	7/16				
13/16	ST-1226		9/16		1/2	
7/8	ST-1228	1/2	5/8	9/16	9/16	
15/16	ST-1230	9/16		5/8		
31/32	ST-1231					
1	ST-1232		3/4		5/8	
EXTRA DEEP 12-POINT						
11/16	SD-1222	3/8				
13/16	SD-1226		9/16		1/2	
7/8	SD-1228T					
1	SD-1232		3/4		5/8	
DRAG LINK SOCKET BITS						
15/16	SB-30	Size Blade—7/64 x 15/16"				
1-1/4	SB-40	Size Blade—3/32 x 1-1/4"				
HEAVY DUTY PATTERN—3/4" Square Drive REGULAR 12-POINT						
1-1/16	H-1234	5/8	7/8	3/4		
1-1/8	H-1236				3/4	
1-1/4	H-1240	3/4		7/8		
1-5/16	H-1242		1		7/8	
1-7/16	H-1246	7/8		1		
1-1/2	H-1248		1-1/8		1	
1-5/8	H-1252	1		1-1/8		
SOCKET ATTACHMENTS, WRENCHES, ETC.						
No.		Piece				
MIDGET PATTERN—1/4" Square Drive						
NM-20A	Sliding T Handle—4-1/2" long					
NM-51	REVERSIBLE Ratchet—4-1/2" long					
NM-106	Extension Driver—6" long; plastic handle					
NMP-1	Phillips Screw Driver Attachment					
NMP-2	Phillips Screw Driver Attachment					
BANTAM PATTERN—3/8" Square Drive						
B-15	Speeder—16-1/2" long, with revolving Grip					
B-20A	Sliding T Handle—6-1/2" long					
B-40	Flex Handle—8" long; flexible head					
B-51	REVERSIBLE Ratchet—6-1/2" long					
B-108	Extension Bar—8" long					
B-110	Extension Bar—5-3/4" long					
B-115	Extension Bar—10-1/2" long					
B-140	Universal Joint					
BP-2	Phillips Screw Driver Attachment					
BP-3	Phillips Screw Driver Attachment					
BP-4	Phillips Screw Driver Attachment					
BS-130	Adapter 3/8" sq. female and 1/2" sq. male					
SOCKET ATTACHMENTS, WRENCHES, ETC.						
No.		Piece				
STANDARD PATTERN—1/2" Square Drive						
S-10	Speeder—12" long, with revolving Grips					
S-15	Speeder—17-1/2" long, with revolving Grips					
S-20A	Sliding T Handle—11" long					
S-41	Extra Long Flex Handle—17" flexible head					
S-51	REVERSIBLE Ratchet—10-1/2" long					
S-55	REVERSIBLE Ratchet Adapter					
S-110P	Extension Bar—5-1/2" long					
S-115P	Extension Bar—10-1/2" long					
S-121P	Extension Bar—20" long					
S-140	Universal Joint					
SH-130	Adapter—1/2" sq. female—3/4" sq. male					
HEAVY DUTY PATTERN—3/4" Square Drive						
H-20A	Sliding T Handle—17-1/2" long					
H-41	Flex Handle—20" long; flexible head					
H-51	REVERSIBLE Ratchet—19" long					
H-104	Extension Bar—4" long					
H-110	Extension Bar—8" long					
H-115	Extension Bar—15-1/2" long					
H-140	Universal Joint					
LONG THIN "SUPERWRENCHES"						
1090D	Openings 1/2" & 9/16"—8" long					
1090D	Openings 5/8" & 11/16"—8" long					
1092F	Openings 3/4" & 7/8"—9" long					
1094	Openings 3/4" & 7/8"—9" long					
MIDGET "SUPERWRENCHES"						
1106	Openings 13/64" & 7/32"—3" long					
1197	" 15/64" & 1/4" 3" long					
1108	" 9/32" & 11/32"—3" long					
1108A	" 1/4" & 5/16"—3-1/2" long					
1109	" 5/16" & 3/8"—3" long					
OPEN END-BOX "SUPERWRENCHES"						
1159	Openings 5/16" & 5/16"—4-3/8" long					
1160	" 3/8" & 3/8"—5" long					
1161	" 7/16" & 7/16"—5-3/8" long					
1162	" 1/2" & 1/2"—6" long					
1163	" 9/16" & 9/16"—6-3/4" long					
1164	" 5/8" & 5/8"—7-5/8" long					
1166	" 3/4" & 3/4"—9-1/2" long					
1167	" 7/8" & 7/8"—10-1/2" long					
1168	" 15/16" & 15/16"—13" long					
1170	" 1" & 1"—13" long					
ADJUSTABLE HOOK SPANNERS						
1471	Capacity for Circles, 3/4 to 2"					
1472	" " 1-1/4 to 3"					
1474	" " 2 to 4-3/4"					
"SUPERJUSTABLES"						
6"	Capacity—3/4"					
12"	" —1-5/16"					
SPECIAL "SUPERWRENCH"						
1998B	For Star Nut, etc.—Bendix Hydraulic					
"SUPERPLIERS," ETC.						
76	Needle Nose Side Cutting Pliers—6" long					
1517	Pliers, 13"; for brake-shoe springs					
1519	Midget, 4-1/2"; 4-position slip-joint plier					
1520	Standard, 9-1/2"; 8-position slip-joint					
REGULAR SCREW DRIVERS						
4	Square Blade—length 4"					
6	Square Blade—length 6"					
8	Square Blade—length 8"					
12	Square Blade—length 12"					
43	Round Blade—length 3"					
46	Round Blade—length 6"					
50	Round Blade—length 10"					
62	Regular Stubby—blade length, 1-1/2"					
PHILLIPS SCREW DRIVERS						
WP-1	Fits Screws No. 4 and smaller					
WP-2	" " " 5 to 9 inclusive					
WP-3	" " " 10 to 16 inclusive					
WP-4	" " " 18 and larger					
WP-62	Stubby, " 5 to 9 inclusive					
PUNCHES						
P-4	Pin Punch—6" long—1/8" point					
P-6	Pin Punch—6" long—3/16" point					
P-8	Pin Punch—8" long—1/4" point					
P-13	Solid Punch—6" long—3/32" point					
P-14	Solid Punch—8" long—1/8" point					
P-25	Long Taper Punch—9" long—5/32" point					
P-26	Long Taper Punch—10" long—3/16" point					
P-30	Prick Punch—5" long					
P-40	Center Punch—5" long					
CHISELS						

WILLIAMS' "SUPERSOCKET" WRENCH SETS
Selected Alloy Steel

FOR DIESEL ENGINE SERVICE



Set Illustrated is DLP-65

SET No. DLM-52

**For Diesel Engine
Mechanics**

Total Weight, 35-5/8 lbs.

SET No. DLE-53

**For Diesel Engine
Electricians**

Total Weight, 33 lbs.

SET No. DLP-65

**For Diesel Engine
Pipe Fitters**

Total Weight, 41-1/2 lbs.

All Sets Complete in Metal Case, 6-3/4 x 7-1/2 x 23-1/4"

These sets are specially designed for mechanics, electricians and pipe fitters who service diesel engine installations in all types of stationary and mobile units such as power plants, locomotives, ships, trucks, tractors, buses, etc. They are particularly adapted for use by manufacturers of diesel powered equipment who require service tools as part of the original equipment or in assembly work.

(Contents listed on following page)

DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' "SUPER SOCKET" WRENCH SETS
Selected Alloy Steel

CONTENTS

SET No. DLM-52		SET No. DLE-53		SET No. DLP-65	
No.	Description	No.	Description	No.	Description
BANTAM 3/8" DRIVE SOCKETS and ATTACHMENTS					
B-51	Reversible Ratchet, 6-1/2" long.	B-51	Reversible Ratchet, 6-1/2" long.	B-51	Reversible Ratchet, 6-1/2" long.
B-115	Extension Bar, 10-1/2" long . . .	B-110	Extension Bar, 5-1/2" long . . .	B-110	Extension Bar, 5-1/2" long . . .
B-140	Universal Joint . . .	B-115	Extension Bar, 10-1/2" long . . .	B-115	Extension Bar, 10-1/2" long . . .
B-1212	3/8" Socket 12-Pt. Opening . . .	B-140	Universal Joint . . .	B-140	Universal Joint . . .
B-1214	7/16" " " "	B-1214	7/16" " " "	B-1214	7/16" " " "
B-1216	1/2" " " "	B-1216	1/2" " " "	B-1216	1/2" " " "
B-1218	9/16" " " "	B-1218	9/16" " " "	B-1218	9/16" " " "
B-1220	5/8" " " "	B-1220	5/8" " " "	B-1220	5/8" " " "
B-1222	11/16" " " "	B-1222	11/16" " " "	B-1222	11/16" " " "
B-1224	3/4" " " "	B-1224	3/4" " " "	B-1224	3/4" " " "
BU-1216	1/2" Universal Socket 12-Pt. . .	BD-1226	13/16" Ex. Deep Socket 12-Pt. . .	BD-1216	1/2" Ex. Deep Socket 12-Pt. . .
BU-1218	9/16" " " "	B-140	Universal Joint . . .	BD-1220	5/8" Ex. Deep Socket 12-Pt. . .
				BD-1224	3/4" Ex. Deep Socket 12-Pt. . .
STANDARD 1/2" DRIVE SOCKETS and ATTACHMENTS					
S-51	Reversible Ratchet, 10-1/2" long . . .	S-51	Reversible Ratchet, 10-1/2" long . . .	S-40	Flex Handle, 12" long . . .
S-15	Speeder, 17-1/2" long . . .	S-15	Speeder, 17-1/2" long . . .	S-51	Reversible Ratchet, 10-1/2" long . . .
S-41	Flex. Handle, 17-1/4" long . . .	S-41	Flex. Handle, 17-1/4" long . . .	S-110P	Extension Bar, 5-1/2" long . . .
S-110P	Extension Bar, 5-1/2" long . . .	S-30	Screw Driver Attachment . . .	S-115P	Extension Bar, 10-1/2" long . . .
S-115P	Extension Bar, 10-1/2" long . . .	S-140	Universal Joint . . .	S-121P	Extension Bar, 20" long . . .
S-140	Universal Joint . . .	ST-1212	3/8" Socket 12-Pt. Opening . . .	S-140	Universal Joint . . .
ST-1212	3/8" Socket 12-Pt. Opening . . .	ST-1214	7/16" " " "	ST-1216	3/8" Socket 12-Pt. Opening . . .
ST-1214	7/16" " " "	ST-1216	1/2" " " "	ST-1218	9/16" " " "
ST-1216	1/2" " " "	ST-1218	9/16" " " "	ST-1220	5/8" " " "
ST-1218	9/16" " " "	ST-1219	19/32" " " "	ST-1222	11/16" " " "
ST-1220	5/8" " " "	ST-1220	5/8" " " "	ST-1224	3/4" " " "
ST-1222	11/16" " " "	ST-1222	11/16" " " "	ST-1226	7/8" " " "
ST-1224	3/4" " " "	ST-1224	3/4" " " "	ST-1228	1-1/16" " " "
ST-1226	13/16" " " "	ST-1226	25/32" " " "	ST-1230	3/4" Universal Socket 12-Pt. . .
ST-1228	7/8" " " "	ST-1228	13/16" " " "	SD-1224	3/4" Ex. Deep Socket 12-Pt. . .
ST-1230	15/16" " " "	ST-1228	7/8" " " "	SD-1224	3/4" Ex. Deep Socket 12-Pt. . .
ST-1232	1" " " "	ST-1230	15/16" " " "	SD-1228	7/8" Ex. Deep Socket 12-Pt. . .
ST-1234	1-1/16" " " "	ST-1232	1" " " "	SD-1236	1-1/8" Ex. Deep Socket 12-Pt. . .
ST-1236	1-1/8" " " "	ST-1234	1-1/16" " " "		
ST-1238	1-3/16" " " "	ST-1236	1-1/8" " " "		
ST-1240	1-1/4" " " "	ST-1238	1-3/16" " " "		
SD-1216	1/2" Ex. Deep Socket, 12-Pt. . .	ST-1240	1-1/4" " " "		
SD-1224	3/4" Ex. Deep Socket, 12-Pt. . .				
DOUBLE OFFSET-BOX "SUPERRENCHES"					
8725B	1/2 x 9/16" Opening . . .	D. H. ENGINEERS' 15° Angle "SUPERRENCHES"		8723	3/8 x 7/16" Opening . . .
8727	9/16 x 5/8" " "			8725B	1/2 x 9/16" " "
8727A	5/8 x 11/16" " "			8727	9/16 x 5/8" " "
8731A	3/4 x 7/8" " "			8727A	5/8 x 11/16" " "
8033A	7/8 x 15/16" " "			8729	5/8 x 3/4" " "
				8731A	3/4 x 7/8" " "
				8037	1-1/16 x 1-1/4" " "
				9723	3/8 x 7/16" (Short Pattern) . . .
				9725B	1/2 x 9/16" " "
				9725	7/16 x 1/2" " "
				9727	9/16 x 5/8" " "
D. H. ENGINEERS' 15° Angle "SUPERRENCHES"					
A1723	3/8 x 7/16" Opening . . .	A1721	5/16 x 3/8" Openings . . .	8723	3/8 x 7/16" Opening . . .
A1725	7/16 x 1/2" " "	A1723	3/8 x 7/16" " "	8725B	1/2 x 9/16" " "
A1725B	1/2 x 9/16" " "	A1725	7/16 x 1/2" " "	8727	9/16 x 5/8" " "
A1727	9/16 x 5/8" " "	A1727	9/16 x 9/16" " "	8727A	5/8 x 11/16" " "
A1027B	5/8 x 11/16" " "	A1727	9/16 x 5/8" " "	8729	5/8 x 3/4" " "
A1029B	11/16 x 3/4" " "	A1027	19/32 x 11/16" " "	8731A	3/4 x 7/8" " "
A1731A	3/4 x 7/8" " "	A1027B	5/8 x 11/16" " "	8037	1-1/16 x 1-1/4" " "
A1031B	25/32 x 13/16" " "	A1729	5/8 x 3/4" " "	9723	3/8 x 7/16" (Short Pattern) . . .
A1033A	7/8 x 15/16" " "	A1033C	15/16 x 1" " "	9725B	1/2 x 9/16" " "
A1033C	15/16 x 1" " "	A1735	1 x 1-1/8" " "	9725	7/16 x 1/2" " "
		A1036B	1-1/16 x 1-1/8" " "	9727	9/16 x 5/8" " "
PLIERS					
46	Diagonal Pliers, 6" . . .	46	Diagonal Pliers, 6" . . .	1318	9/16" Opening . . .
76	Needle Nose Pliers, 6" . . .	76	Needle Nose Pliers, 6" . . .	1320	5/8" " "
370	Side Cutting Pliers, 7" . . .	370	Side Cutting Pliers, 7" . . .	1322	11/16" " "
46	Diagonal Cutting Pliers, 6" . . .			1324	3/4" " "
				1328	7/8" " "
				1332	1" " "
				1334	1-1/16" " "
				1336	1-1/8" " "
SCREW DRIVERS					
28	Screw Driver, 8" . . .	28	Screw Driver, 8" . . .	D. H. ENGINEERS' 15° Angle "SUPERRENCHES"	
32	Screw Driver, 12" . . .	32	Screw Driver, 12" . . .	A1723	3/8 x 7/16" Opening . . .
62	Stubby Screw Driver . . .	62	Stubby Screw Driver . . .	A1725	7/16 x 1/2" " "
				A1725B	1/2 x 9/16" " "
				A1727	9/16 x 5/8" " "
				A1027B	5/8 x 11/16" " "
				A1729	5/8 x 3/4" " "
				A1029B	11/16 x 3/4" " "
				A1731A	3/4 x 7/8" " "
				A1031B	25/32 x 13/16" " "
				A1033A	7/8 x 15/16" " "
				A1036B	1-1/16 x 1-1/8" " "
"SUPERJUSTABLE"					
8"	"Superjustable" Wrench . . .	10"	"Superjustable" Wrench . . .	MISCELLANEOUS TOOLS	
		10"	"Superjustable" Wrench . . .	8"	"Superjustable" Wrench . . .
				370	Side Cutting Pliers, 7" . . .
				32	Screw Driver, 12" . . .

♦ REGISTERED TRADE MARK

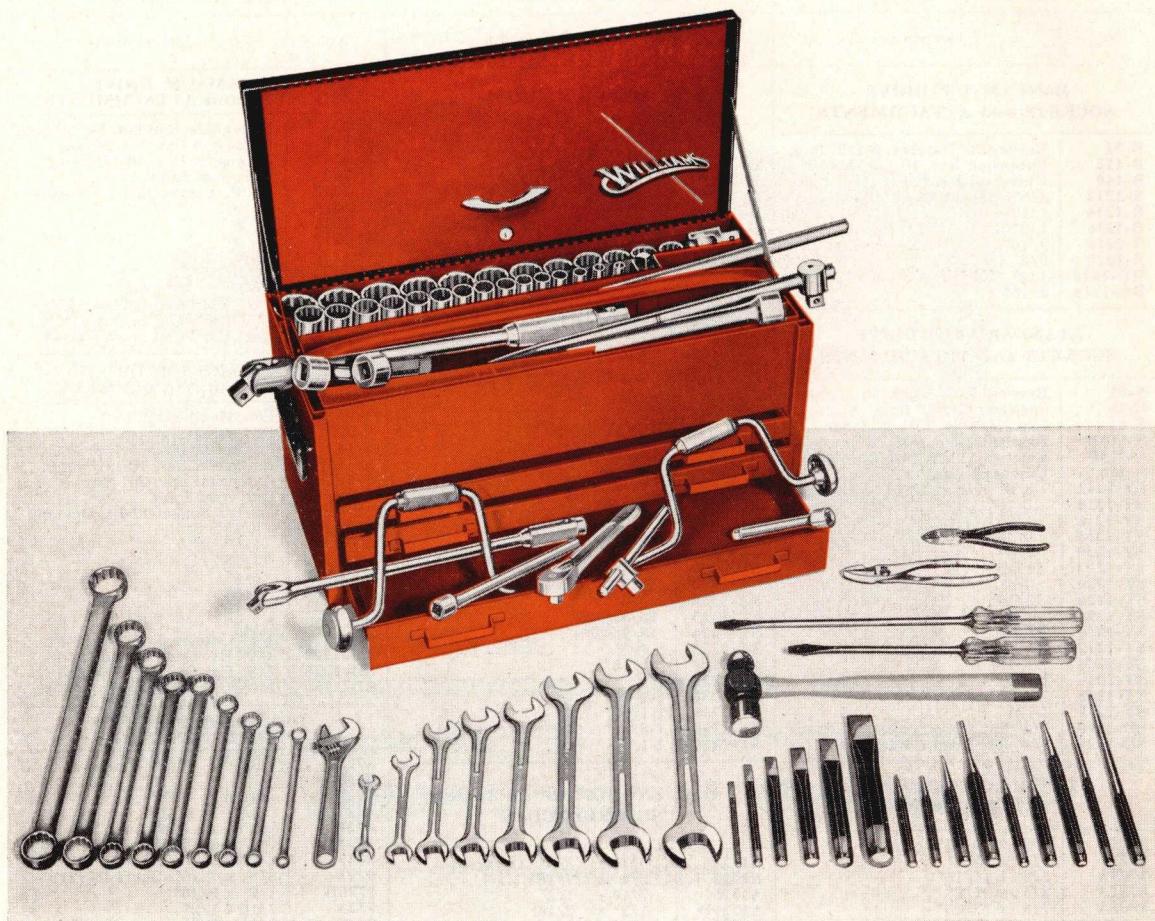
DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPER SOCKET" WRENCH SETS
Selected Alloy Steel

FOR GENERAL DIESEL ENGINE SERVICE



SET No. DLS-70

Complete in Metal Chest

10-1/4 x 12 x 23-1/2"

Total Weight, 96-1/8 lbs.

This set is specially designed for mechanics doing general service work on diesel engine installations in all types of stationary and mobile units such as power plants, locomotives, ships, trucks, tractors, buses, etc. It contains all the standard tools needed for general diesel engine service work. Ideal for all diesel locomotive service shops.

Chest is constructed of heavy gauge steel adequately reinforced and welded. Drawers with handy compartments operate on free acting suspension slides. Removable "tote" tray gives easy access to the roomy interior. Cylinder lock on hinged front panel locks entire chest.

(Contents listed on following page)

♦ REGISTERED TRADE MARK

1-52

WILLIAMS' "SUPER SOCKET" WRENCH SETS
Selected Alloy Steel

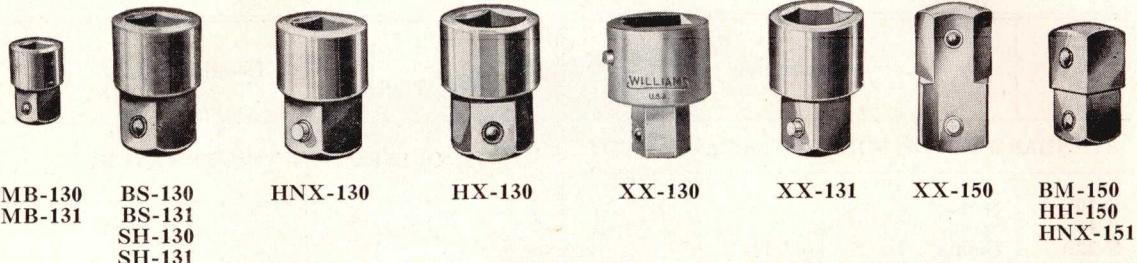
CONTENTS

No.	Description	No.	Description
STANDARD 1/2" Dr. SOCKETS and ATTACH'TS			
S-10	Speeder 12" long.....	7723	3/8 x 7/16" opening.....
S-15	Speeder 17-1/2" long.....	7725	7/16 x 1/2" "
S-20A	Sliding T Handle 11" long.....	7725B	1/2 x 9/16" "
S-41	Flex Handle 17-1/4" long.....	7727	9/16 x 5/8" "
S-51	Reversible Ratchet, 10-1/2" long.....	7729	5/8 x 3/4" "
S-110P	Extension Bar, 5-1/2" long.....	7029B	11/16 x 3/4" "
S-115P	Extension Bar, 10-1/2" long.....	7731A	3/4 x 7/8" "
S-140	Universal Joint.....	7033C	15/16 x 1" "
ST-1212	3/8" Socket 12-Point Opening.....	7735A	1-1/16 x 1-1/8" "
ST-1214	7/16" " " "	7037	1-1/16 x 1-1/4" "
ST-1216	1/2" " " "		
ST-1218	9/16" " " "		
ST-1219	19/32" " " "		
ST-1220	5/8" " " "		
ST-1222	11/16" " " "		
ST-1224	3/4" " " "		
ST-1225	25/32" " " "		
ST-1226	13/16" " " "		
ST-1228	7/8" " " "		
ST-1230	15/16" " " "		
ST-1231	31/32" " " "		
ST-1232	1" " " "		
ST-1234	1-1/16" " " "		
ST-1236	1-1/8" " " "		
ST-1238	1-3/16" " " "		
ST-1240	1-1/4" " " "		
HEAVY DUTY 3/4" Dr. SOCKETS and ATTACH'TS			
H-20A	Sliding T Handle, 17-1/2" long.....	370	Side Cutting Pliers, 7"
H-41	Flex Handle, 20" long.....	46	Diagonal Cutting Pliers, 6"
H-41B	Sliding Bar for H-41.....	28	Screw Driver, 8"
H-104	Extension Bar, 4" long.....	32	Screw Driver, 12"
H-110	Extension Bar, 8" long.....	2	Ball Pein Hammer.....
H-115	Extension Bar, 15-1/2" long.....		
H-140	Universal Joint.....		
H-1228	7/8" Socket 12-Point Opening.....		
H-1230	15/16" " " "		
H-1232	1" " " "		
H-1234	1-1/16" " " "		
H-1236	1-1/8" " " "		
H-1238	1-3/16" " " "		
H-1240	1-1/4" " " "		
H-1242	1-5/16" " " "		
H-1244	1-3/8" " " "		
H-1246	1-7/16" " " "		
H-1248	1-1/2" " " "		
H-1252	1-5/8" " " "		
"SUPERJUSTABLES"			
8"	"Superjustable" Wrench	P-4	1/8" Pin Punch
		P-6	3/16" Pin Punch
		P-8	1/4" Pin Punch
		P-13	3/32" Solid Punch
		P-14	1/8" Solid Punch
		P-25	5/32" Long Taper Punch
		P-26	3/16" Long Taper Punch
		P-30	Prick Punch
		P-40	Center Punch
		C-8	1/4" Cold Chisel
		C-12	3/8" " "
		C-16	1/2" " "
		C-20	5/8" " "
		C-24	3/4" " "
		C-36	1-1/8" " "

♦ REGISTERED TRADE MARK

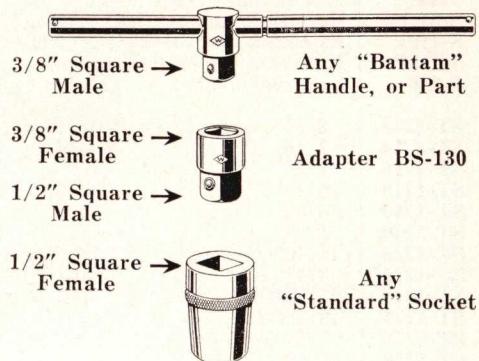
WILLIAMS' ♦ "SUPERSOCKET" WRENCHES
Selected Alloy Steel

ADAPTERS — FOR "SUPERSOCKETS", HANDLES AND PARTS



Williams' Adapters provide for the use of Sockets of one pattern with Handles and Parts of another pattern. See illustration at right showing, for instance, how Adapter BS-130 permits use of "Bantam" Handles (3/8" square male drive) with "Standard" Sockets (1/2" square female drive).

Finished in chrome-plate over nickel.



No.	ADAPTER	Wgt. Ea.	No.
BM-150	3/8" square male and 1/4" square male. Adapts Sockets with 3/8" drive-opening to MR-51 Refrigeration Ratchet and other Midget Handles and Parts.....	.03	BM-150
MB-130	1/4" square female and 3/8" square male. Adapts Handles with 1/4" square drive to Sockets with 3/8" square drive.....	.05	MB-130
MB-131	1/4" square male and 3/8" square female. Adapts Sockets with 1/4" square drive to Handles with 3/8" square drive-plug.....	.05	MB-131
BS-130	1/2" square male and 3/8" square female. Adapts "Bantam" Handles and Parts (3/8" square male drive) to "Standard" Sockets (1/2" square drive-opening) ..	.13	BS-130
BS-131	3/8" square male and 1/2" square female. Adapts "Bantam" Sockets (3/8" square drive-opening) to "Standard" Handles and Parts (1/2" square male drive) ..	.15	BS-131
SH-130	3/4" square male and 1/2" square female. Adapts "Standard" Handles and Parts (1/2" square male drive) to "Heavy Duty" Sockets (3/4" square female drive) ..	.31	SH-130
SH-131	3/4" square female and 1/2" square male. Adapts "Heavy Duty" Handles and Parts (3/4" square male drive) to Standard Sockets (1/2" square drive-opening) ..	.44	SH-131
HX-130	1" hex male and 3/4" square female. Adapts "Heavy Duty" Handles and Parts (3/4" square male drive) to Sockets with 1" hex female drive.....	.59	HX-130
HNX-130	1" square male and 3/4" square female. Adapts "Heavy Duty" Handles and Parts (3/4" square male drive) to "Extra Heavy Duty" Sockets (1" square drive-opening).....	1.7	HNX-130
XX-130	1" hex male and 1" square female. Adapts Sockets 1" hex drive-opening to Handles and Parts with 1" square male drive.....	1.2	XX-130
XX-131	1" hex female and 1" square male. Adapts Sockets 1" square drive-opening to Handles and Parts with 1" hex male drive.....	.93	XX-131
HH-150	5/8" square male and 3/4" square male. Adapts Sockets with 5/8" square drive-opening to Ratchets with 3/4" square drive; also, Ratchets with 5/8" square drive to Sockets with 3/4" square drive-opening.....	.2	HH-150
HNX-151	1" square male and 3/4" square male. Adapts Sockets with 1" square drive-opening to Ratchets with 3/4" square drive; also, Ratchets with 1" square drive to Sockets with 3/4" square drive-opening.....	.44	HNX-151
XX-150	1" square male and 1" hex male. Adapts Sockets with 1" square drive-opening to Ratchets with 1" hex male drive; also, Ratchets with 1" square drive to Sockets, 1" hex drive-opening.....	.53	XX-150

WILLIAMS' ♦ "SUPER SOCKET" WRENCHES
Selected Alloy Steel
 FOR HOLLOW-SCREWS



SET No. AL-102
Complete in Metal Case

13 Pieces — 10 Sockets and 3 Attachments
Total Weight, 4-1/8 lbs.

2 Color Steel Case Only
1-1/2 x 3 x 12-1/2" — Weight, 1-1/2 lbs.

This Set of Williams' detachable "Supersocket" Bits and Parts provides especially efficient wrenches for all popular hollow (hex socket) set screws and cap screws; see table.

Replacing old type L-shape wrenches, bent from hex bar steel, these tools provide all the advantages of the Detachable Socket Wrench system for users of Hollow-Screws.

Detachable "Bits," with projecting hex plug, are substituted for conventional detachable sockets. Only Williams' Bits have knurled end for fast spinning of screws before tightening.

Bits and Parts, made from Selected Alloy Steel, are heat-treated in electric furnaces. They inter-change in Williams' regular Midget, Bantam and Standard "Supersocket" lines.

No.	HANDLES and PARTS	Wgt. Ea.	No.
NM-51	Reversible "Superratchet"—1/4" Square Drive, 4-1/2" long, Reverses instantly	.16	NM-51
B-20A	Sliding T Handle—3/8" Square Drive, 6-1/2" long.....	.26	B-20A
S-40	Flex Handle—1/2" Square Drive, 12" long, flexible head.....	1.4	S-40

"SUPERSOCKET" BITS — SOLD IN SET No. AL-102 or INDIVIDUALLY

Bit No.	Hex. Plug, Size	Square Drive	Weight Each, Lbs.	For Hollow Screws		Bit No.
				Set Screw	Cap Screw	
NAM-604	1/8	1/4	.03	1/4	No. 8	NAM-604
NAM-605	5/32	1/4	.03	5/16	10 & 12	NAM-605
NAM-606	3/16	1/4	.03	3/8	1/4	NAM-606
NAM-607	7/32	1/4	.03	7/16	5/16	NAM-607
AB-608	1/4	3/8	.06	1/2 & 9/16	.....	AB-608
AB-610	5/16	3/8	.06	5/8	3/8 & 7/16	AB-610
AS-612	3/8	1/2	.11	3/4	1/2 & 9/16	AS-612
AS-616	1/2	1/2	.13	7/8	5/8	AS-616
AS-618	9/16	1/2	.15	1 & 1 1/8	3/4 & 7/8	AS-618
AS-620	5/8	1/2	.14	1 1/4 & 1 3/8	1	AS-620

♦ REGISTERED TRADE MARK

WILLIAMS' REFRIGERATION WRENCHES
Selected Alloy Steel

WILLIAMS' RATCHET WRENCHES
(*Drop-Forged—Chrome-plated*)



Especially efficient for speedy and accurate adjustment of all valves.

No. B-50A

Weight, .43 Lb.

Has $\frac{1}{4}$ " square drive-opening in ratchet; also, $\frac{1}{4}$ " sq. hole near end of handle. Length, 6-1/2".

No. B-50B

Weight, .43 Lb.

Has $\frac{5}{16}$ " sq. ratchet drive-opening. Length, 6-1/2".

WILLIAMS' RATCHET WRENCHES
(*Selected Alloy—Cadmium Plated*)



No. MR-51

Weight, .29 Lb.

This 6" light weight drop-forged reversible ratchet has $\frac{1}{4}$ " female drive in head, $\frac{5}{16}$ ", $\frac{1}{4}$ " and $\frac{3}{16}$ " square openings and $\frac{1}{2}$ " hex opening in handle for delicate adjustment of valve stems, etc.

WILLIAMS' WHEEL PULLER No. 5

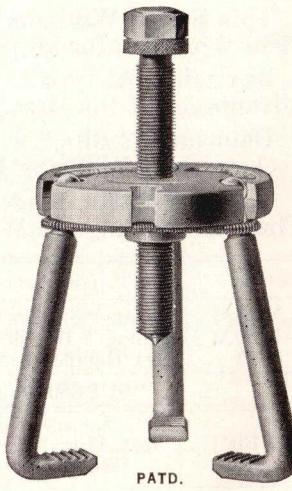
FOR REFRIGERATION SERVICE

This Williams' Wheel Puller is a simple efficient tool developed for the many pulling jobs in Refrigeration Service, such as flywheels, fans and pulleys. It can also be used for many pulling jobs on electric motors, etc.

The body, forged from high tensile steel, has four sockets into which either two or all three of the arms may be placed in various positions, providing a combination of grips. Flywheels with even or odd numbers of spokes are pulled with equal ease. All three arms are necessary for odd-spoked wheels, while only two are needed for an even number of spokes. The pulling capacity is 7" diameter.

Easily adjusted arms, processed from alloy steel, are held in place by an endless spring. They are instantly reversible by merely turning the arm in the socket for either internal or external pulling. This feature eliminates the need of removing or depositioning the arms.

The hex head of the power screw, on which any convenient wrench can be used, has a knurled band to facilitate rapid hand turning. Its cone point fits into the center-hole of the shaft end.



PAT'D.

No.	Capacity Diameter	Body Diameter	Length Arms	Weight Each, Lbs.	Extra Parts			No.
					Arms	Screw	Spring	
5	7	3 1/4	4 1/4	1.7				5

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WILLIAMS' "SUPERSOCKET" WRENCHES
Selected Alloy Steel
 FOR REFRIGERATION SERVICE

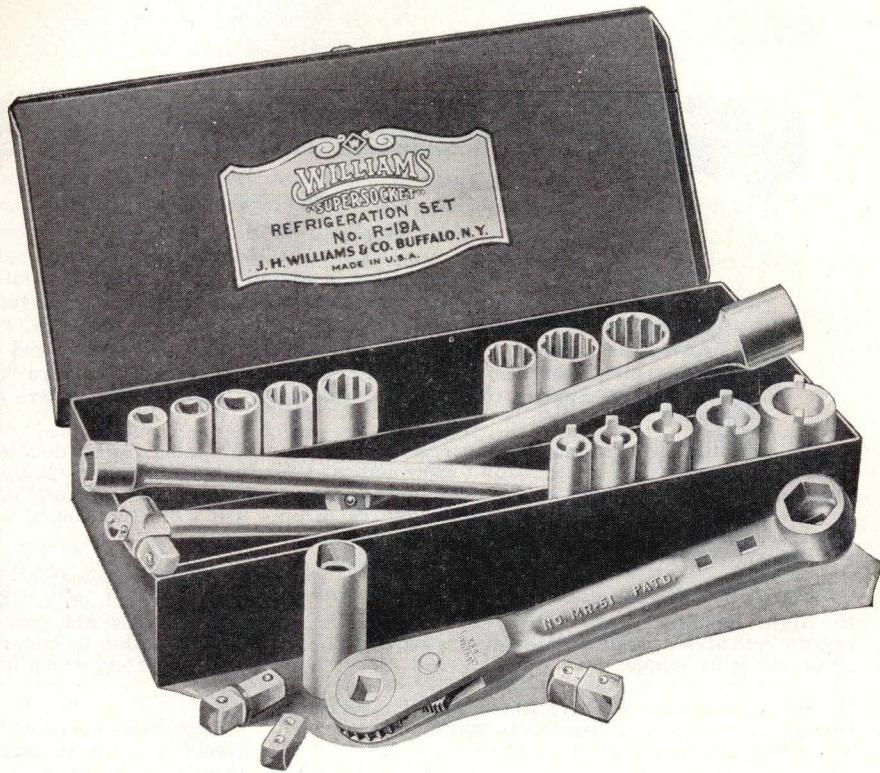
SET No. R-19A

21 Pieces

Total Weight, 2-3/4 lbs.

Steel Case Only
 1-1/4 x 3-3/8 x 7-3/4"
 Weight, 3/4 lbs.

This handy, compact assortment of "Supersocket" Wrenches has been carefully selected for servicing and repairing all makes of Electric Refrigerators. 14 slim, straight-wall Chrome-Alloy Sockets and 7 Accessories, including a specially designed Reversible Ratchet, described in table below.



CONTENTS OF SET

†Midget "Supersockets"
1/4" Square Drive



NM-406 to
NM-812

No.	Square Opening	Diameter		Weight Each Lbs.
		Nose	Base	
NM-406	3/16	7/16	1/2	.03
NM-407	7/32	15/32	1/2	.03
NM-408	1/4	1/2	1/2	.03
NM-810	*5/16	9/16	9/16	.03
NM-812	*3/8	11/16	11/16	.05

† All 7/8" long.

Bantam "Supersockets"
3/8" Square Drive



B-1214 to
B-1218

No.	12-Point Opening	Diameter		Weight Each Lbs.
		Nose	Base	
B-1214	7/16	39/64	21/32	.05
B-1216	1/2	11/16	11/16	.06
B-1218	9/16	49/64	49/64	.07

†Packing Gland Nut "Supersockets"
1/4" Square Drive



NMR-2 to
NMR-10

No.	Size Prongs Depth	Diameter		Weight Each Lbs.	
		Width	Inside Outside		
NMR-2	3/32	5/64	21/64	7/16	.03
NMR-4	3/32	1/8	21/64	15/32	.03
NMR-6	3/32	7/64	21/64	9/16	.06
NMR-8	1/8	1/8	29/64	11/16	.09
NMR-10	3/32	5/64	9/16	13/16	.13

† All 1-1/2" long.

HANDLES AND PARTS

No.	Piece	Weight Ea. Lbs.	No.	Piece	Weight Ea. Lbs.
MR-51	This 6" light weight drop-forged reversible ratchet has 1/4" female drive in head, 5/16", 1/4" and 3/16" square openings and 1/2 hex opening in handle for delicate adjustment of valve stems, etc.....	.29	NM-115	Extension—6" long; 1/4" square drive, male and female.....	.17
NM-20A	Sliding T Handle—4-1/2" long; 1/4" square male drive.....	.1	MM-150	Plug Adapter—1" long; 1/4" square and 9/32" square for driving former 9/32" drive sockets	.03
B-110	Extension—5-1/2" long; 3/8" square drive, male and female.....	.23	NM-150	Plug Adapter—3/4" long; both ends 1/4" square male.....	.02
			BM-150	Adapter—3/8" square male and 1/4" square male.....	.03

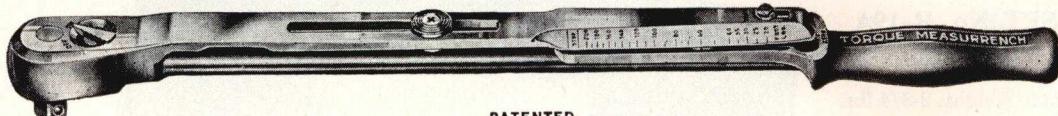
♦ REGISTERED TRADE MARK

WILLIAMS' TORQUE + "MEASURRENCH" No. S-57

REVERSIBLE RATCHET WITH R. H. TORQUE INDICATING SIGNAL

Standard Pattern—1/2" Square Drive

Weight in Metal Case, 5.9 Lbs.



PATENTED

Closely limited torque application is essential in automotive, aviation and Diesel motors; also for many industrial appliances. Such fine adjustments make an efficient indicator of torque a vital necessity in modern practice. "Measurrench" solves the problem wherever limited and equal tension is required on nuts, bolts, studs, etc. Designed especially for use with Williams' Standard "Supersockets", but can be applied to any detachable socket having 1/2" square drive opening.

Williams' Ratchet Torque "Measurrench" is the most efficient and durable tool for torque indicating service on the market. It combines new mechanical features with Williams' standards of superior quality and design, resulting in an unusually strong, effective tool at moderate price.

Wrench may be used in two ways, as below:—
By Sight Reading—An easily read scale on the handle indicates applied tightening pressures from 20 to 200 foot-pounds.

By Sound Reading—A sharp sound signal is given for any desired torque from 35 to 200 foot-pounds, by setting the simple sound device.

Accuracy does not depend on delicate gears, levers, or dials, but upon rugged sections of high tensile steel. Right hand torque only is measured, but the action reverses for left hand turning.

Simple in design and sturdy in construction, the reversible ratchet mechanism is a highly desirable feature. The 36-tooth ratchet wheel, with

Williams' twin double-tooth, oscillating pawl provides constant engagement with TWO teeth of ratchet-gear in both ON and OFF rotation of nuts.



It makes possible the unusually short operating swing of only 1/30 of a full turn; obstruction hazards are reduced to the minimum. The wrench action is instantly reversed by a mere flip of the shifter, which is flush with the head.

The well balanced drop-forged handle, with specially designed grip, is 19-1/2" long for ample leverage; the head is exceptionally compact and free from protrusions, for easy use in close places.

Every part is made of selected alloy and high tensile steel, accurately machined and heat-treated. Chrome-plated, with entire top and sides of head and calibrated bar buffed; handle, "satin" chrome. Packed in individual metal case.

USE WILLIAMS' TORQUE "MEASURRENCH"

FOR

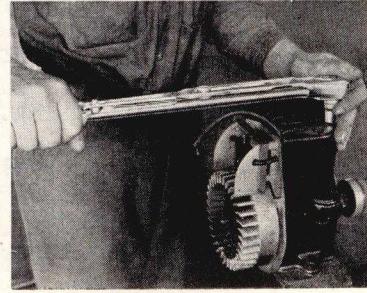
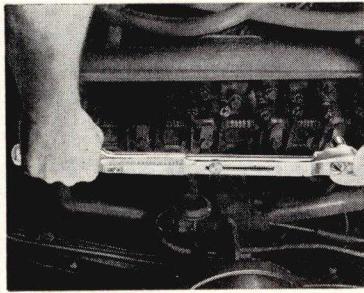
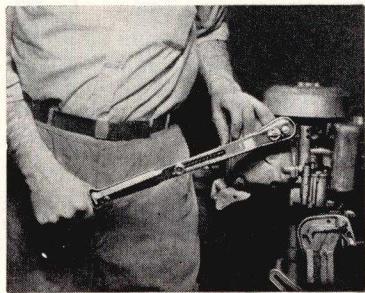
limiting torque in tightening nuts and bolts in DIE CAST ALLOY METAL PARTS.

FOR

accurately following MANUFACTURERS' SPECIFIED TENSIONS.

FOR

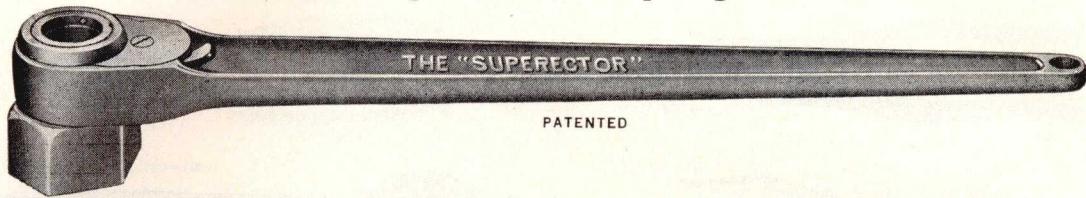
all applications which require EQUAL TENSION ON NUTS, STUDS, BOLTS, ETC.



♦ REGISTERED TRADE MARK

1-52

WILLIAMS' "SUPERECTOR"
REVERSIBLE RATCHET WRENCHES
With Quadruple Pawls and Drop-Forged Handle



Williams' "Superector" Ratchet Wrenches are built for rapid operation in the most severe service such as bridge, structural and other work requiring fast, dependable tools of rugged strength. They are instantly reversible in action. Three sizes of mechanism—E1, E2 and E3—in five long, slim but powerful handles provide ample leverage for the hardest jobs.



HEX SOCKETS

SOCKETS have hole extending clear through their center so that nuts may be turned all the way down on any length of bolt. They are in three groups—E1, E2 and E3—to fit corresponding wrench handles, as shown in table below. Sockets in one group are not interchangeable with those in another group. All are heat-treated for maximum tough strength.



SQUARE SOCKETS

Whitworth Std. sizes on page 214.

Only Williams' "SUPERECTOR" offers all the following advantages:—

QUADRUPLE PAWLS. Instead of the usual single pawl, bearing against one gear tooth, the "Superector" provides increased bearing and strength by 2 pawls engaging 2 teeth for both ON and OFF rotation of nuts. All 4 pawls are of hardened tool steel, so designed as to provide pure crushing action on the pawls—the sturdiest construction possible, with no "back-lash."

HANDLE, or Wrench proper, is drop-forged—not cast—in order to utilize the extra strength afforded by the pawls.

GEAR TEETH. The "Superector" is the only line of wrenches of this type with 20 teeth in all socket gears, instead of the usual 16 teeth. Con-

sequently, all wrenches will rotate nuts with only an 18° swing of the wrench as against 22-1/2°.

SHIFTER-LEVER, when in neutral, completely disengages all pawls for easy insertion and removal of the Socket. A flip of the lever reverses the action of the wrench.

SOCKET RETAINING COLLAR has a projection on its inner surface which registers easily with a corresponding slot in the neck of the Socket. No fumbling for set screw "spots" when engaging the headless, slotted socket screws.

COVER PLATE, securely seated in the wrench head, is fastened by one screw, fully enclosing the mechanism and permitting easy removal.

FINISH. Wrenches and Sockets are finished in baked light gray enamel.

When ordering, always specify Wrenches and Sockets by number.

WRENCHES			SOCKETS ONLY—Hex and Square						
No.	Length, from center of Head	Wgt. Each, Lbs.	Nominal Opening, Size Across Flats	Number	Amer. Std. HEAVY	Amer. Std. LIGHT	Amer. Std. REGRL.	Amer. Std. Nut Hex & Sqr.	
			Hex Socket	Wgt. Ea. Lbs.	Square Socket	Wgt. Ea. Lbs.	Nut (U.S.A.)	Nut Hex Only	
E1 SOCKETS below fit E1-24 and E1-36 Wrenches ONLY									
E1-24	24	9.3	1- 1/16	E1-617	2.6	E1-416	2.6	5/8	3/4
			1- 1/8	E1-618	2.6	E1-417	2.6		3/4
E1-36	36	12.8	1- 1/4	E1-620	2.5	E1-420	2.6	3/4	7/8
			1- 5/16	E1-621	2.5	E1-421	2.6		7/8
			1- 7/16	E1-623	2.5	E1-423	2.8	7/8	1
			1- 1/2	E1-624	2.5	E1-424	2.8		1
			1- 5/8	E1-626	2.6	E1-426	2.9	1	1-1/8
			1-11/16	E1-627	2.6				1-1/8
			1- 3/4	E1-628	2.6				
			1-13/16	E1-629	2.8	E1-429	3.3	1-1/8	1-1/4
			1- 7/8	E1-630	2.8	E1-430	3.3		1-1/4
			2	E1-632	3.2	E1-432	3.5	1-1/4	1-3/8
			2- 1/16	E1-633	3.2				1-3/8
			2- 3/16	E1-635	3.6	E1-435	4	1-3/8	
			2- 1/4	E1-636	3.6	E1-436	4	1-1/2	
E2 SOCKETS below fit E2-36 and E2-48 Wrenches ONLY									
E2-36	36	20.9	2- 3/16	E2-632	5.5	E2-432	5.7	1-1/4	1-3/8
E2-48	48	24.	2- 3/8	E2-635	5.8	E2-435	6	1-3/8	1-1/2
			2- 9/16	E2-638	6.3	E2-438	6.5	1-1/2	
			2- 3/4	E2-641	6.7	E2-441	7.1	1-5/8	
			2-15/16	E2-644	7.2	E2-444	7.9	1-3/4	
			3- 1/8	E2-647	8	E2-447	9	1-7/8	
				E2-650	9	E2-450	10	2	
E3 SOCKETS below fit E3-48 Wrenches ONLY									
E3-48	53	40.6	3- 1/8	E3-650	14.9	E3-450	16	2	
			3- 1/2	E3-656	15.6	E3-456	17	2-1/4	
			3- 7/8	E3-662	16.8	E3-462	18.3	2-1/2	
			4- 1/4	E3-668	17.9	E3-468	19.9	2-3/4	
			4- 5/8	E3-674	18.4	E3-474	22.5	3	

**"SUPERECTOR" SET
No. E1-12**



Total Weight, 42 Lbs.

12 Pieces

In Wooden Box
36 x 6 x 5-1/2"

"Superector"
Wrench E1-24
and 11 Sockets:

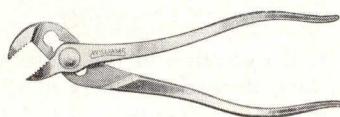
7 Hex—1-1/16, 1-1/4,
1-7/16, 1-5/8, 1-13/16, 2
and 2-3/16 inches.

4 Square—1-1/16, 1-1/4,
1-7/16 and 1-5/8 inches.

WILLIAMS' PLIERS

"SUPERPLIERS"

(Slip-Joint)

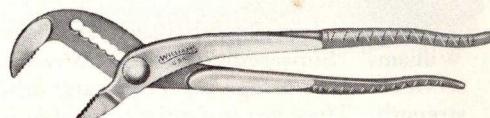


Midget No. 1519, 4-position joint opens 0 to 9/16", with jaws parallel at the most important openings. Efficient for wiring, panel, switchboard, radio, and other delicate work. Chrome-plated over nickel, faces polished.

No.	Length	Weight Each, Lbs.
1519	4-1/2	.08

"SUPERPLIERS"

(Slip-Joint)



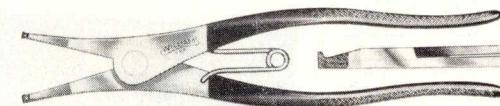
Standard No. 1520 is long and slim; 8-position joint opens 0 to 2". Diamond embossed handles provide firm hand grip. Gray satin finish, faces polished.

Heavy Duty No. 1521, 7-position slip-joint opens 0 to 2". Heavy duty construction makes this plier particularly useful in plumbing and electrical trades. Diamond embossed handles provide firm hand grip. Gray satin finish, faces polished.

No.	Length	Weight Each, Lbs.
1520	9-1/2	.57
1521	10	1.6

LOCK RING PLIERS

For Snap Lock Rings



Pliers are designed for spreading "Horse Shoe" snap lock rings on automotive brakes, transmissions, differentials, pulleys, etc. Finish, gun metal blue handles with polished nose.

No.	Length	Weight Each, Lbs.
1515	8	.33

BRAKE PLIERS

For inserting and removing springs (internal)



For use only on passenger cars, light and medium trucks excepting Ford "A". Gray satin finish; head faces polished.

No.	Length	Weight Each, Lbs.
1517	13	.75

WILLIAMS' PLIERS

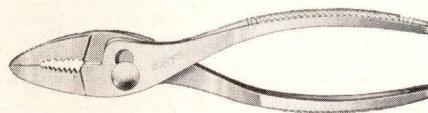
COMBINATION SLIP-JOINT PLIERS



These Combination Pliers, with 2 position slip-joints, are very efficient for general service. All are sturdy, well designed tools. Drop-forged from selected steel, with knurled handles; polished and nickel-plated.

No.	Length	Weight Each, Lbs.
*5	5	.27
6	6	.44
8	8	.53
10	10	.88

THIN NOSE COMBINATION SLIP-JOINT PLIERS



These thin nose pliers, with 2 position slip-joints, are very efficient for close-quarters work. They are sturdy, well designed tools. Drop-forged from selected steel, knurled handles; polished and nickel-plated.

No.	Length	Weight Each, Lbs.
16	6	.36

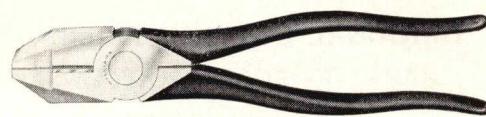
COMBINATION SLIP-JOINT PLIERS WITH SIDE CUTTER



These sturdy combination pliers have keen side cutters and a flush head rivet on one side. Drop-forged from selected steel, with knurled handles; faces polished.

No.	Length	Weight Each, Lbs.
370	7	.53

LINEMEN'S SIDE CUTTING PLIERS



These are heavy duty well-balanced pliers to meet the requirements of linemen and electricians. Surfaces of jaws are deep milled for holding and bending wire. Jaws have powerful cutters. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
206	6	.43
207	7	.59
208	8	.96

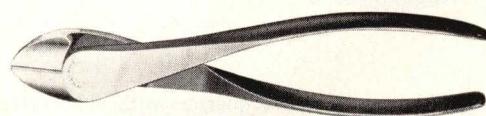
BATTERY PLIERS



Offset jaws allow ample hand clearance for battery terminal work. Milled teeth assure positive grip. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
67	7	.48

HIGH LEVERAGE DIAGONAL CUTTING PLIERS



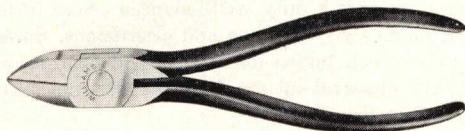
Added leverage for easier and more powerful cutting. They are particularly adapted to heavy duty work. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
57	7	.58

*DISCONTINUED: will supply until stock is exhausted.

WILLIAMS' PLIERS

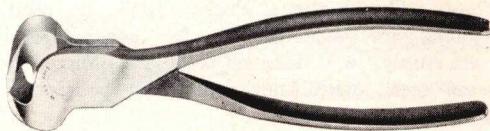
DIAGONAL CUTTING PLIERS



Mechanics and electricians find many uses for these rugged tools. Cutting edges are made for lasting service. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
46	6	.35
47	7	.52

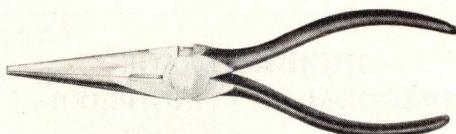
END CUTTING NIPPERS



These powerful, easy cutting nippers have carefully sharpened edges. Wide throat provides ample clearance. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
166	6	.65
167	7	.75

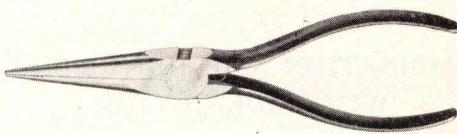
**LONG CHAIN NOSE PLIERS
WITH SIDE CUTTER**



Long, thin nose for close quarters with side-cutting jaws. Ideal for ignition and electrical work, etc. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
76	6	.33
77	7	.42

**LONG CHAIN NOSE PLIERS
WITHOUT SIDE CUTTER**

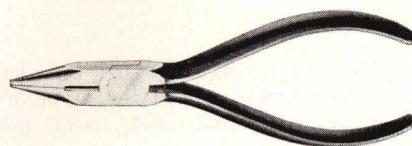


Long, tapered nose is ideal in close quarters encountered in ignition and electrical work. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
86	6	.31
87	7	.42

WILLIAMS' PLIERS

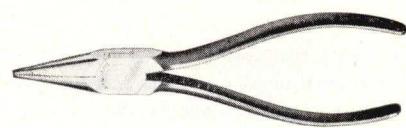
**SHORT CHAIN NOSE PLIERS
WITH SIDE CUTTER**



For fine mechanical work such as done in the jewelry, optical and electronics fields. Jaws have side cutters. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
95	5	.23

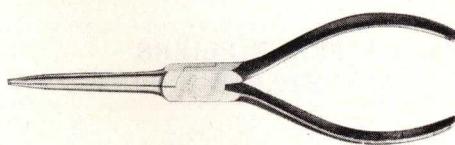
**SHORT CHAIN NOSE PLIERS
WITHOUT SIDE CUTTERS**



For fine mechanical work such as done in the jewelry, optical and electronics trades. No cutter in jaws. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
105	5	.23

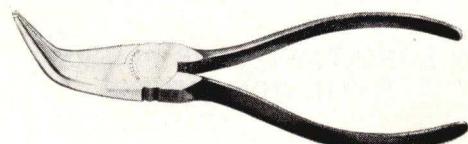
LONG NEEDLE NOSE PLIERS



The long slender jaws have strong gripping ability. Jaws will not become distorted in normal use. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
116	6	.21

BENT NEEDLE NOSE PLIERS

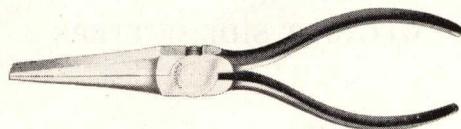


The long slender jaws are bent to reach around or under obstructions. Jaws have strong gripping ability. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
126	6	.21

WILLIAMS' PLIERS

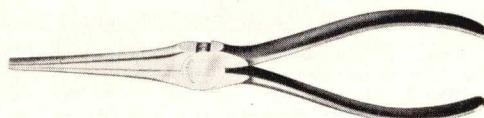
DUCK BILL PLIERS
(Flat Jaws)



Used in highly inaccessible places where there is not space for ordinary pliers or fingers. Strong jaws have firm grip. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
146	6	.42

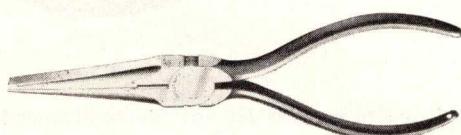
EXTRA LONG DUCK BILL PLIERS



Widely used by textile weavers, telephone maintenance men and punch press operators for inserting and removing work. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
157	7	.37

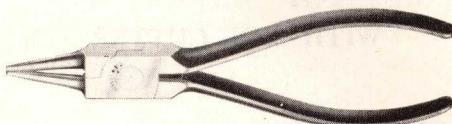
LONG FLAT NOSE PLIERS WITH SIDE CUTTER



Side cutting jaws have long gripping surfaces. In addition to auto radiator repair work these pliers are widely used in textile mills on certain types of knitting machines. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
196	6	.33

ROUND NOSE PLIERS



Extensively used for flat or round wire forming. Nose and jaws are amply strong for this type of work. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
134	4	.13
136	6	.37

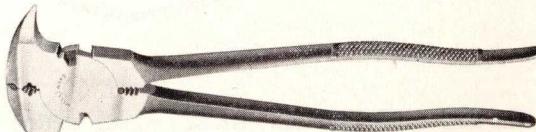
GAS AND BURNER PLIERS



These pliers have larger capacities than ordinary pliers of this type. Handles are designed for comfortable grip. Drop-forged from selected steel, faces polished.

No.	Length	Weight Each, Lbs.
178	8	.81
180	10	1.3

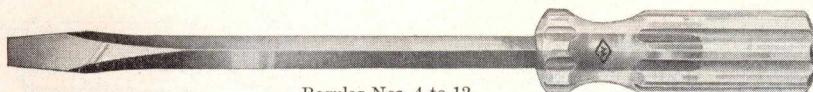
FENCE PLIERS AND STAPLE PULLER



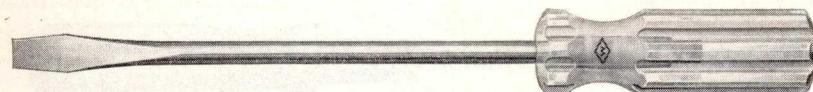
For maintaining and installing wire fence on metal or wood posts. Head has hammer on one jaw, starting and pulling point on the other. Pliers also have two wire cutters, staple puller and wire splicer in nose, wire stretcher and lug lifter. Drop-forged from selected steel

No.	Length	Weight Each, Lbs.
190	10	1.5

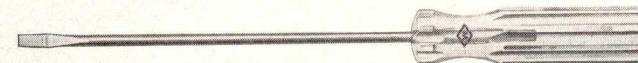
WILLIAMS' SCREW DRIVERS



Regular Nos. 4 to 12



Regular Nos. 24 to 32



Electricians' Nos. 43 to 50



Regular Stubby No. 62



Pocket No. 52

Williams' Regular, Electricians', Pocket and Stubby (adjusting) Screw Drivers are all fitted with handles of a tough transparent composition, an insulator of electricity. Fluted for sure, comfortable grip. The blades, hardened and tempered throughout their entire length, are solidly anchored in the handles.

Regular patterns are available with either square or round blades. Electricians' have round blades and the Stubby a square blade. The Pocket has round blade and is fitted with pocket clip which is secured in a grooved recess, as illustrated.

All Screw Drivers packed 6 in Cardboard Box, excepting No. 52, 12 per box.

REGULAR — SQUARE BLADE — COMPOSITION HANDLE

No.	Blade Length	Stock Size	Tip Width	Weight Ea., Lbs.
4	4	1/4	5/16	.19
6	6	5/16	5/16	.38
6B	6	3/8	3/8	.5
8	8	3/8	3/8	.59
12	12	3/8	3/8	.75

REGULAR — ROUND BLADE — COMPOSITION HANDLE

24	4	1/4	1/4	.19
26	6	5/16	5/16	.33
28	8	3/8	3/8	.53
32	12	3/8	3/8	.66

ELECTRICIANS' — ROUND BLADE — COMPOSITION HANDLE

43	3	3/16	3/16	.09
46	6	3/16	3/16	.14
50	10	3/16	3/16	.17

POCKET (with Clip) — ROUND BLADE — COMPOSITION HANDLE

52	2-1/4	1/8	1/8	.03
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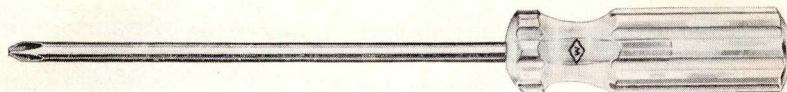
REGULAR STUBBY (Adjusting) — COMPOSITION HANDLE

62	1-1/2	1/4	5/16	.14
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DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' SCREW DRIVERS



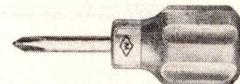
Phillips Nos. TP-1 to TP-4



Phillips Nos. WP-1 to WP-4



Phillips Stubby No. TP-62



Phillips Stubby No. WP-62

FOR PHILLIPS SCREWS

These Williams' Screw Drivers, will fit the entire range of Phillips recessed-head screws. These, and the Phillips Stubby (adjusting), Screw Driver have round Selected Alloy Steel blades, hardened and tempered, that are securely anchored in handles made of wood or a tough transparent composition which is an insulator of electricity. Fluted for sure, comfortable grip.

All Screw Drivers packed 6 in cardboard box.

PHILLIPS — COMPOSITION OR WOOD HANDLES

No. With Composition Handles	No. With Wood Handles	Fits Screws No.	Blade Length	Stock Size	Weight, Ea., Lbs.
TP-1	WP-1	4 and Smaller	3	9/64	.06
TP-2	WP-2	5 to 9 incl.	4	1/4	.19
TP-3	WP-3	10 to 16 incl.	6	5/16	.31
TP-4	WP-4	18 and larger	8	3/8	.53

PHILLIPS STUBBY (Adjusting) — COMPOSITION OR WOOD HANDLES

TP-62	WP-62	5 to 9 incl.	1-1/2	1/4	.09
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DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' SCREW DRIVER SETS

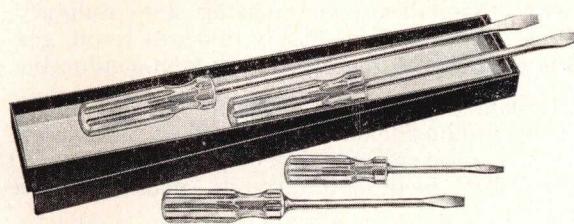
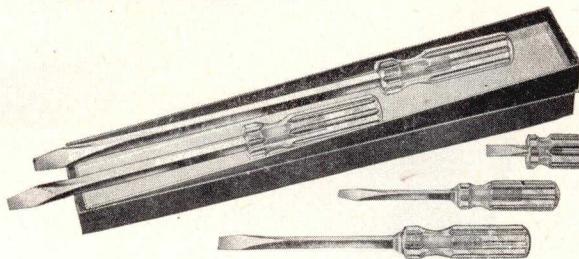
SET No. 1-D

Complete in Cardboard Box

Weight, 2 lbs.

CONTENTS

1 each Nos. 4, 6, 8, 12 and 62 Regular Williams' Screw Drivers with square blades and composition handles.



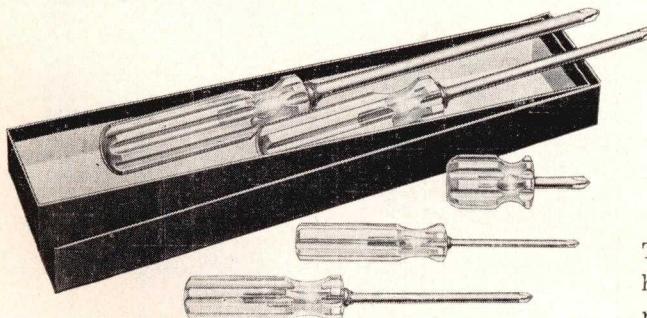
SET No. 3-D

Complete in Cardboard Box

Weight, 1/2 lb.

CONTENTS

1 each Nos. 43, 46, 50 and 52 Williams' Electricians' Screw Drivers with composition handles.



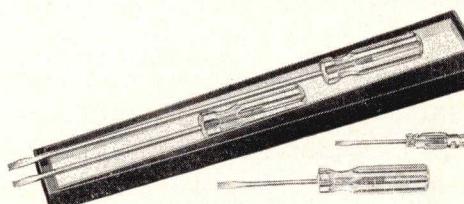
SET No. 2-D

Complete in Cardboard Box

Weight, 1-5/8 lbs.

CONTENTS

1 Each Nos. 24, 26, 28 and 32 Regular Williams' Screw Drivers with round blades and composition handles.



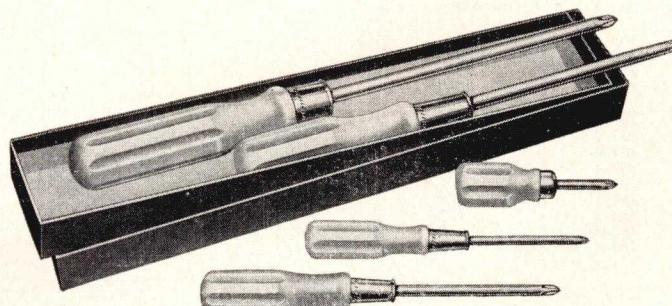
SET No. TP-5

Complete in Cardboard Box

Weight, 1-1/8 lbs.

CONTENTS

1 each Nos. TP-1, TP-2, TP-3, TP-4 and TP-62 Phillips Screw Drivers with composition handles. This combination covers the entire range of Phillips Screws.



SET No. WP-5

Complete in Cardboard Box

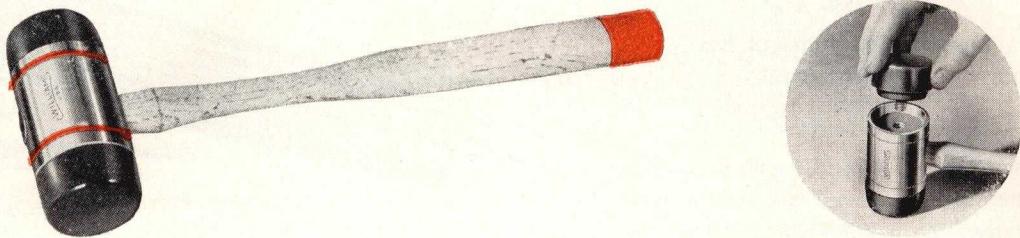
Weight, 1-1/8 lbs.

CONTENTS

1 each Nos. WP-1, WP-2, WP-3, WP-4 and WP-62 Phillips Screw Drivers with hard wood handles. This combination covers the entire range of Phillips Screws.

WILLIAMS' SOFT-FACE HAMMERS

With "Nuplaflex" and Nylon Interchangeable Tips



Williams' Soft-Face Hammers are available with "Nuplaflex", an amazing slow-resiliency, self-healing material, and Nylon interchangeable tips. "Nuplaflex" is highly resistant to oil, gasoline, common industrial solvents and acids. It is non-explosive and electrically non-conductive.

Williams' Soft-Face Hammers equipped with "Nuplaflex" tips are safety tools which minimize the danger of fire, explosion and flying particles. They produce maximum impact with minimum effort—no sting or vibration and minimize marring or damage to painted, polished or plated surfaces. "Nuplaflex" is available in three hardnesses—soft, medium and tough—making it more versatile than conventional type soft face hammers.

"Nuplok" (Pat. Pending) tip locking device is used throughout. All hammers have selected hickory handles. Series 100, 150, 153, 200, 250 and 300 have die-cast aluminum alloy heads with bright finish. Series 105, 155, 205, 207, 255 and 305 have die-cast zinc-alloy heads with bright finish.

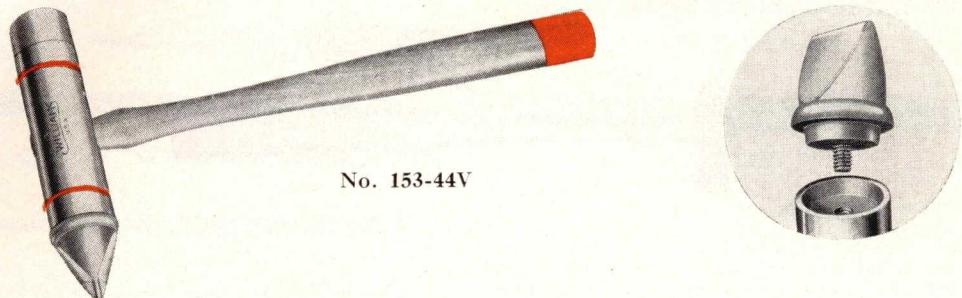
SOFT-FACE HAMMERS COMPLETE WITH TIPS

No.	Head Diameter Inches	Head Length, Inches	Handle Length, Inches	Weight	Kind of Tip	Minimum Quantity Package
100-1	1	3-1/2	11-3/8	5 oz.	Soft	6
100-2	1	3-1/2	11-3/8	5 oz.	Medium	6
100-3	1	3-1/2	11-3/8	5 oz.	Tough	6
100-4	1	3-1/2	11-3/8	5 oz.	Nylon	6
105-1	1	3-1/2	11-3/8	8 oz.	Soft	6
105-2	1	3-1/2	11-3/8	8 oz.	Medium	6
105-3	1	3-1/2	11-3/8	8 oz.	Tough	6
105-4	1	3-1/2	11-3/8	8 oz.	Nylon	6
150-1	1-1/2	4-3/8	13	3/4 lb.	Soft	6
150-2	1-1/2	4-3/8	13	3/4 lb.	Medium	6
150-3	1-1/2	4-3/8	13	3/4 lb.	Tough	6
150-4	1-1/2	4-3/8	13	3/4 lb.	Nylon	6
153-1	1-1/2	7	13	1-1/8 lb.	Soft	6
153-2	1-1/2	7	13	1-1/8 lb.	Medium	6
153-3	1-1/2	7	13	1-1/8 lb.	Tough	6
153-4	1-1/2	7	13	1-1/8 lb.	Nylon	6
153-44V	1-1/2	7	13	1-1/8 lb.	*Nylon	6
155-1	1-1/2	4-3/8	13	1-1/4 lb.	Soft	6
155-2	1-1/2	4-3/8	13	1-1/4 lb.	Medium	6
155-3	1-1/2	4-3/8	13	1-1/4 lb.	Tough	6
155-4	1-1/2	4-3/8	13	1-1/4 lb.	Nylon	6
200-1	2	5	13	1-1/4 lb.	Soft	6
200-2	2	5	13	1-1/4 lb.	Medium	6
200-3	2	5	13	1-1/4 lb.	Tough	6
200-4	2	5	13	1-1/4 lb.	Nylon	6
205-1	2	5	13	2 lb.	Soft	6
205-2	2	5	13	2 lb.	Medium	6
205-3	2	5	13	2 lb.	Tough	6
205-4	2	5	13	2 lb.	Nylon	6
207-1	2	6-3/8	15	3 lb.	Soft	4
207-2	2	6-3/8	15	3 lb.	Medium	4
207-3	2	6-3/8	15	3 lb.	Tough	4
207-4	2	6-3/8	15	3 lb.	Nylon	4
250-1	2-1/2	6-1/4	15	2 lb.	Soft	4
250-2	2-1/2	6-1/4	15	2 lb.	Medium	4
250-3	2-1/2	6-1/4	15	2 lb.	Tough	4
250-4	2-1/2	6-1/4	15	2 lb.	Nylon	4

* Hammer furnished with one regular round and one Cross Peen Tip.

WILLIAMS' SOFT-FACE HAMMERS

With "Nuplaflex" and Nylon Interchangeable Tips



No. 153-44V

This new Nylon Tipped Cross Peen Hammer No. 153-44V is specially designed for peening work in aircraft and automotive assembly and sheet metal work. It has been extremely successful under rigorous tests. The long, light-weight head has one wedge-pointed Cross Peen Nylon tip, No. 15-4V, and one regular round Nylon tip, No. 15-4. Williams Nylon Cross Peen Tips may be located in either a horizontal or vertical position in relation to the handle of the hammer.

Nylon Cross Peen Tip No. 15-4V will also fit in Williams Soft-Face Hammers, series 150 and 155. Regular 1-1/2" "Nuplaflex" Tips, Nos. 15-1 to 15-3, as well as Nylon Tip No. 15-4, will fit this new Hammer No. 153. Hammer has a selected hickory handle and die-cast aluminum alloy head with bright finish.

SOFT-FACE HAMMERS COMPLETE WITH TIPS — (Continued)

No.	Head Diameter Inches	Head Length, Inches	Handle Length, Inches	Weight	Kind of Tip	Minimum Quantity Package
255-1	2-1/2	6-1/4	13	4 lb.	Soft	4
255-2	2-1/2	6-1/4	13	4 lb.	Medium	4
255-3	2-1/2	6-1/4	13	4 lb.	Tough	4
255-4	2-1/2	6-1/4	13	4 lb.	Nylon	4
300-1	3	7	14	3-1/2 lb.	Soft	2
300-2	3	7	14	3-1/2 lb.	Medium	2
300-3	3	7	14	3-1/2 lb.	Tough	2
300-4	3	7	14	3-1/2 lb.	Nylon	2
305-1	3	7	14	6 lb.	Soft	2
305-2	3	7	14	6 lb.	Medium	2
305-3	3	7	14	6 lb.	Tough	2
305-4	3	7	14	6 lb.	Nylon	2
*307-2	3	7-7/8	28	9 lb.	Medium	1
*307-3	3	7-7/8	28	9 lb.	Tough	1
*307-4	3	7-7/8	28	9 lb.	Nylon	1
*308-2	3	9	36	12 lb.	Medium	1
*308-3	3	9	36	12 lb.	Tough	1
*308-4	3	9	36	12 lb.	Nylon	1

EXTRA "NUPLAFLEX" AND NYLON TIPS

No.	Head Diam. Inches	Kind of Tip	Minimum Quantity Pkg.	Weight Each, Lbs.	No.	Head Diam. Inches	Kind of Tip	Minimum Quantity Pkg.	Weight Each, Lbs.
10-1	1	Soft	12	.05	20-3	2	Tough	4	.27
10-2	1	Medium	12	.05	20-4	2	Nylon	4	.27
10-3	1	Tough	12	.05					
10-4	1	Nylon	12	.05	25-1	2-1/2	Soft	2	.44
					25-2	2-1/2	Medium	2	.44
15-1	1-1/2	Soft	6	.14	25-3	2-1/2	Tough	2	.44
15-2	1-1/2	Medium	6	.14	25-4	2-1/2	Nylon	2	.44
15-3	1-1/2	Tough	6	.14					
15-4	1-1/2	Nylon	6	.14	30-1	3	Soft	2	.66
15-4V	1-1/2	†Nylon	6	.14	30-2	3	Medium	2	.66
20-1	2	Soft	4	.27	30-3	3	Tough	2	.66
20-2	2	Medium	4	.27	30-4	3	Nylon	2	.66

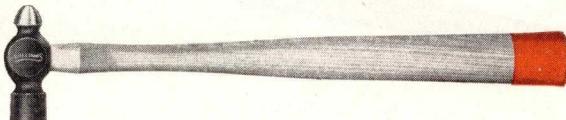
* Head made of steel with rust proof black finish.

† Cross Peen Tip.

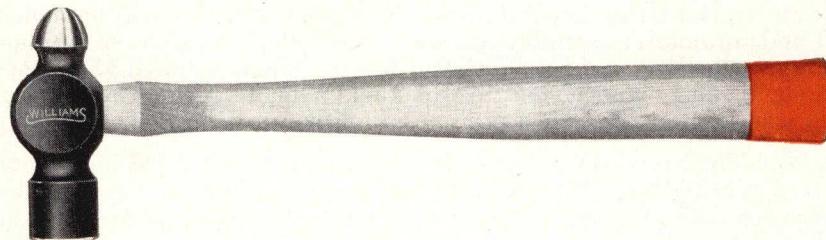
DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' MACHINISTS' BALL PEIN HAMMERS



Nos. 7-0 to 2-0



Nos. 0 to 6

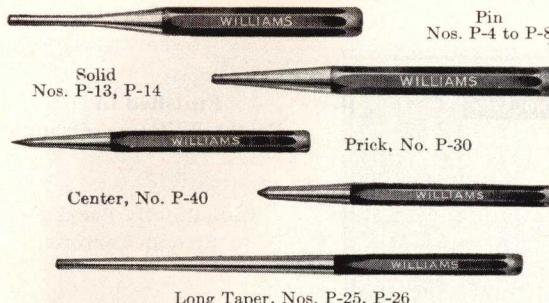
Williams' Ball Pein Hammers are exceptionally well balanced. They are drop-forged from specially selected steel and carefully heat-treated for uniform, dependable strength and hardness. They are built to withstand severe usage.

Handles are made from second growth white hickory and clear lacquered. Each handle is carefully fitted and permanently wedged into the head.

No.	Length	Weight
7-0	9-3/4	2 oz.
5-0	9-3/4	1/4 lb.
3-0	11-1/2	1/2 lb.
2-0	13-1/2	3/4 lb.
0	14	1 lb.
2	14-1/2	1-1/2 lbs.
4	15-1/2	2 lbs
6	16	2-1/2 lbs

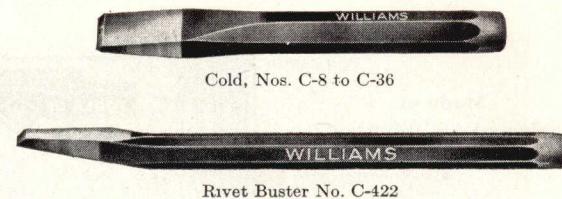
1-52

WILLIAMS' PUNCHES and CHISELS



Williams' Punches are forged from high grade octagon alloy steel, properly hardened and tempered to stand up under the most severe service. Body finished in black, with the taper and head full polished. Packed 6 in cardboard box.

No.	Point Diam.	Stock Size	Length	Wgt., Ea.
PIN PUNCHES				
P-4	1/8	3/8	6	.16
P-6	3/16	1/2	6	.25
P-8	1/4	5/8	8	.53
SOLID PUNCHES				
P-13	3/32	1/2	6	.28
P-14	1/8	1/2	8	.41
LONG TAPER PUNCHES				
P-25	5/32	3/8	9	.22
P-26	3/16	1/2	10	.41
PRICK PUNCH				
P-30		3/8	5	.13
CENTER PUNCH				
P-40		3/8	5	.16



COLD, or FLAT CHISELS

Williams' Chisels of high grade octagon alloy steel, are carefully forged, hardened and tempered. Amply hard for work on tempered material, yet soft enough to minimize chipping and to permit resharpening with a file. Body finished in black with full polished bit and head. Packed 6 in cardboard box, excepting No. C-36, 3 in a box.

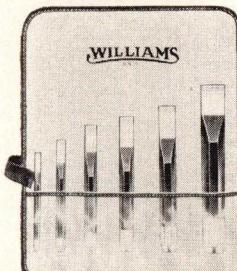
RIVET BUSTER

Designed especially for cutting off hardened rivet heads. A great time saver when used for this purpose, instead of the ordinary chisel. Packed 3 in a box.

No.	Width of Cut	Stock Size	Length	Wgt., Ea.
COLD, or FLAT CHISELS				
C-8	1/4	1/4	4 3/4	.06
C-12	3/8	3/8	5 1/2	.16
C-16	1/2	1/2	6	.31
C-20	5/8	5/8	6 1/2	.5
C-24	3/4	3/4	7	.78
C-36	1 1/8	1	8	1.6
RIVET BUSTER				
C-422	11/16	3/4	12	1.4

WILLIAMS' PUNCH and CHISEL SETS

CHISEL SET No. C-6



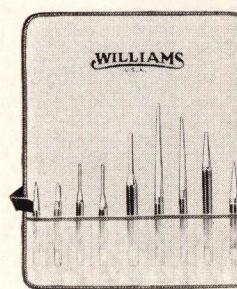
In Leatherette Roll

In Cardboard Box

Weight, 4.3 Lbs.

This compact chisel set contains six Cold or Flat Chisels 1/4", 3/8", 1/2", 5/8", 3/4" and 1-1/8" wide.

PUNCH SET No. P-9



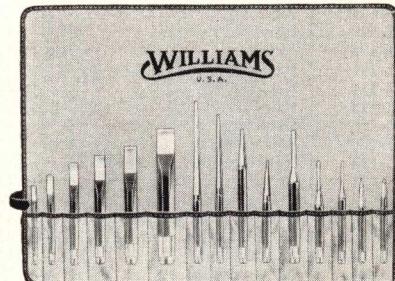
In Leatherette Roll

In Cardboard Box

Weight, 3 Lbs.

This handy punch set contains three Pin Punches with 1/8", 3/16" and 1/4" points; two Solid Punches with 3/32" and 1/8" points; two long Taper Punches with 5/32" and 3/16" points; one Prick Punch and one Center Punch, each 5" long.

PUNCH and CHISEL SET No. PC-15



In Leatherette Roll

In Cardboard Box

Weight, 7.2 Lbs.

This combination set contains a complete assortment of Williams' Punches and Chisels. Set contains six Cold or Flat Chisels 1/4" to 1-1/8" wide; three Pin Punches with 1/8", 3/16" and 1/4" points; two Solid Punches with 3/32" and 1/8" points; two Long Taper Punches with 5/32" and 3/16" points; one Prick Punch and one Center Punch, each 5" long.

DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' TOOL DISPLAY BOARDS

(24 x 30 Inches)

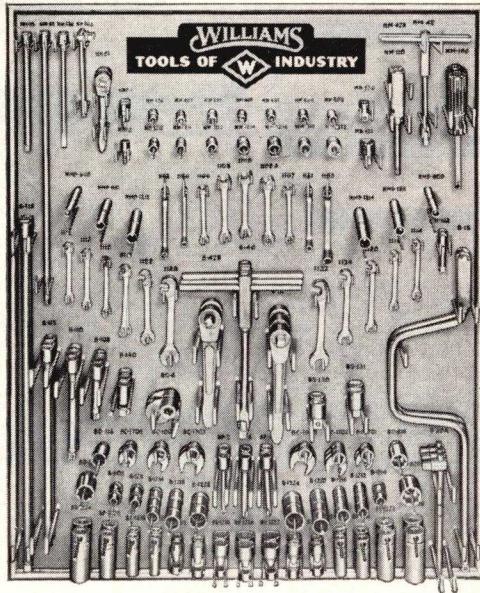
Made of
Selected 3/4" Plywood

Each Panel
Measures 24" x 30"

Trimmed With
Chrome Molding

Easy-to-Read
Numbers

Hooks are
Cadmium Plated



Finished in
Bright Williams' Orange

Individually Packed
in Strong Cartons

Each Display
Holds Complete Selection

Coordinate
Stock and Display

Create More Sales
and Greater Profits

No. 101

Weight, Board Only — 22 lbs.
Weight, Tools Only — 23 lbs.

CONTENTS

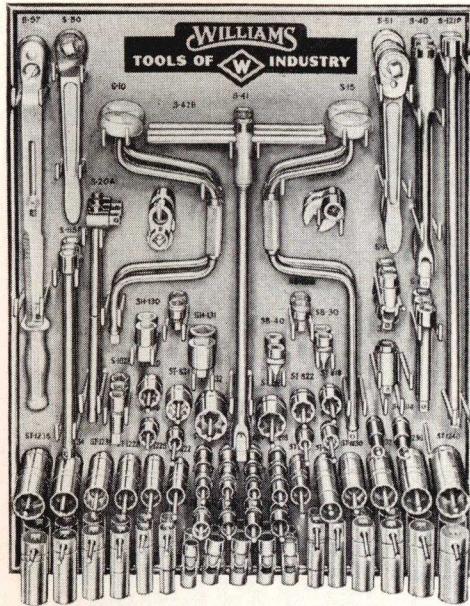
Quan.	No.	Description
2	NM-20A	Sliding T.....
2	NM-42	Flex Handle.....
2	NM-42B	Bar.....
2	NM-51	Ratchet.....
2	NM-102	Extension.....
2	NM-106	Extension.....
2	NM-110	Ext. Driver.....
2	NM-115	Extension.....
2	NM-116	Extension.....
2	NM-126	Screw Driver.....
2	MB-130	Adapter.....
2	MB-131	Adapter.....
2	NMP-1	Phillips Attachment.....
2	NMP-2	Phillips Attachment.....
2	NM-406	3/16" Socket.....
2	NM-407	7/32" Socket.....
2	NM-408	1/4" Socket.....
2	NM-810	5/16" Socket.....
2	NM-812	3/8" Socket.....
2	NM-606	3/16" Socket.....
2	NM-607	7/32" Socket.....
2	NM-608	1/4" Socket.....
2	NM-609	9/32" Socket.....
2	NM-1210	5/16" Socket.....
2	NM-1211	11/32" Socket.....
2	NM-1212	3/8" Socket.....
2	NM-1214	7/16" Socket.....
2	NM-1216	1/2" Socket.....
2	NMD-608	1/4" Socket.....
2	NMD-609	9/32" Socket.....
2	NMD-1210	5/16" Socket.....
2	NMD-1211	11/32" Socket.....
2	NMD-1212	3/8" Socket.....
2	NMD-1214	7/16" Socket.....
3	1106	Open End Midget.....

Quan.	No.	Description
3	1107	Open End Midget.....
3	1108	" " "
3	1108A	" " "
3	1109	" " "
3	1112	" " "
3	1113	" " "
3	1114	" " "
3	1115	" " "
3	1116	" " "
3	1118	" " "
3	1120	" " "
3	1122	" " "
3	1124	" " "
3	1128	" " "
3	1132	" " "
3	1150	Midget Box.....
3	1151	Midget Box.....
3	1152	Midget Box.....
3	1153	Midget Box.....
2	B-15	Speeder.....
2	B-20A	Sliding T Handle.....
2	B-40	Flex Handle.....
2	B-42B	Bar.....
1	B-50	Ratchet.....
3	B-51	Rev. Ratchet.....
2	B-108	Extension.....
2	B-110	Extension.....
2	B-115	Extension.....
1	B-118	Extension.....
2	BS-130	Adapter.....
2	BS-131	Adapter.....
2	B-140	Universal Joint.....
2	BP-2	Phillips Attach.....
2	BP-3	Phillips Attach.....
2	BP-4	Phillips Attach.....

Quan.	No.	Description
2	BC-6	Adj. Crowfoot.....
2	B-608	1/4" Socket.....
2	B-1210	5/16" Socket.....
2	B-1211	11/32" Socket.....
2	B-1212	3/8" Socket.....
3	B-1214	7/16" Socket.....
3	B-1216	1/2" Socket.....
3	B-1218	9/16" Socket.....
3	B-1220	5/8" Socket.....
2	B-1222	11/16" Socket.....
2	B-1224	3/4" Socket.....
2	BU-1212	3/8" Universal.....
2	BU-1214	7/16" "
2	BU-1216	1/2" "
2	BU-1218	9/16" "
2	BU-1220	5/8" "
2	BU-1222	11/16" "
2	BU-1224	3/4" "
2	BC-1700	3/8" Crowfoot.....
2	BC-1701	7/16" "
2	BC-1001	1/2" "
2	BC-1702	9/16" "
2	BC-1703	5/8" "
2	BC-1003	11/16" "
2	BD-1212	3/8" Deep Socket ..
2	BD-1214	7/16" " "
2	BD-1216	1/2" " "
2	BD-1218	9/16" " "
2	BD-1220	5/8" " "
2	BD-1222	11/16" " "
2	BD-1224	3/4" " "
2	BD-1226	13/16" " "
1	BD-814	7/16" Square Deep ..
1	BD-816	1/2" " "
1	BD-818	9/16" " "
1	BD-820	5/8" " "

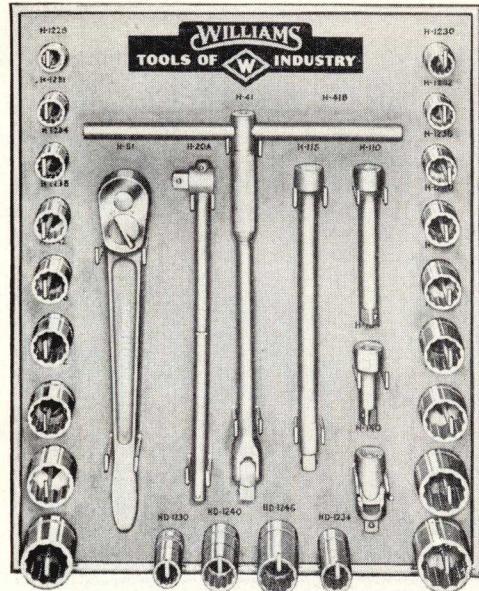
1-52

WILLIAMS' TOOL DISPLAY BOARDS
(24 x 30 Inches)



No. 102

Weight, Board Only—24 lbs.
Weight, Tools Only—61 lbs.



No. 103

Weight, Board Only—19 lbs.
Weight, Tools Only—44.4 lbs.

CONTENTS

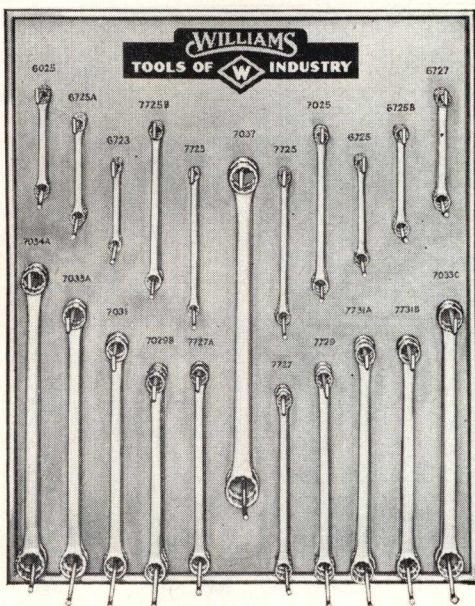
Qa.	No.	Description	Qa.	No.	Description
1	S-10	Speeder	2	ST-1228	7/8" 12 Pt. Skt.
1	S-15	Speeder	2	ST-1230	15/16" " " " " "
2	S-20A	Sliding T. Handle	2	ST-1231	31/32" " " " " "
2	SB-30	Screw Dr. Att.	2	ST-1232	1" " " " " "
2	SB-40	Screw Dr. Att.	2	ST-1234	1-1/16" " " " " "
2	S-40	Flex Handle	2	ST-1236	1-1/8" " " " " "
2	S-41	Flex. Handle	2	ST-1238	1-3/16" " " " " "
2	S-42B	Sliding Bar	2	ST-1240	1-1/4" " " " " "
1	S-50	Ratchet	1	ST-810	5/16" 8 Pt. Skt.
3	S-51	Rev. Ratchet	1	ST-812	3/8" " " " " "
2	S-55	Ratchet Adapter	1	ST-814	7/16" " " " " "
1	S-57	Torque Wrench	1	ST-816	1/2" " " " " "
2	S-60B	Stud Remover	1	ST-818	9/16" " " " " "
2	S-102P	Extension	1	ST-820	5/8" " " " " "
2	S-110P	Extension	1	ST-822	11/16" " " " " "
2	S-115P	Extension	1	ST-824	3/4" " " " " "
1	S-121P	Extension	1	ST-828	7/8" " " " " "
2	SH-130	Adapter	1	ST-832	1" " " " " "
2	SH-131	Adapter	1	SU-1216	1/2" Universal
2	S-140	Universal Joint	1	SU-1218	9/16" " " " " "
2	SC-8	Adj. Crowfoot	1	SU-1220	5/8" " " " " "
2	SC-614	Cadillac Socket	1	SU-1222	11/16" " " " " "
2	AS-616	Hollow Scr. Skt.	1	SU-1224	3/4" " " " " "
2	AS-618	Hollow Scr. Skt.	2	SD-1216	1/2" Deep Skt.
3	ST-1212	3/8" 12 Pt. Skt.	2	SD-1218	9/16" " " " " "
3	ST-1214	7/16" " " " " "	3	SD-1220	5/8" " " " " "
3	ST-1216	1/2" " " " " "	2	SD-1222	11/16" " " " " "
3	ST-1218	9/16" " " " " "	2	SD-1224	3/4" " " " " "
3	SF-1218	9/16" Ford Skt..	3	SD-1226	13/16" " " " " "
2	ST-1219	19/32" 12 Pt. Skt.	2	SD-1228	7/8" " " " " "
3	ST-1220	5/8" " " " " "	2	SD-1228T	7/8" " " " " "
2	ST-1221	21/32" " " " " "	2	SD-1230	15/16" " " " " "
2	ST-1222	11/16" " " " " "	2	SD-1232	1" " " " " "
2	ST-1224	3/4" " " " " "	2	SD-1234	1-1/16" " " " " "
2	ST-1225	25/32" " " " " "	2	SD-1236	1-1/8" " " " " "
2	ST-1226	13/16" " " " " "			

CONTENTS

Quan.	No.	Description
1	H-20A	Sliding T Handle
1	H-41	Flex. Handle
1	H-41B	Sliding Bar
1	H-51	Reversible Ratchet
1	H-104	Extension
1	H-110	Extension
1	H-115	Extension
1	H-140	Universal Joint
1	H-1228	7/8" 12 Pt. Socket
1	H-1230	15/16" " " " " "
1	H-1231	31/32" " " " " "
1	H-1232	1" " " " " "
1	H-1234	1- 1/16" " " " " "
1	H-1236	1- 1/8" " " " " "
1	H-1238	1- 3/16" " " " " "
1	H-1240	1- 1/4" " " " " "
1	H-1242	1- 5/16" " " " " "
1	H-1244	1- 3/8" " " " " "
1	H-1246	1- 7/16" " " " " "
1	H-1248	1- 1/2" " " " " "
1	H-1252	1- 5/8" " " " " "
1	H-1254	1-11/16" " " " " "
1	H-1256	1- 3/4" " " " " "
1	H-1258	1-13/16" " " " " "
1	H-1260	1- 7/8" " " " " "
1	H-1264	2" " " " " "
1	HD-1230	15/16" 12 Pt. Deep Socket
1	HD-1234	1-1/16" " " " " "
1	HD-1240	1-1/4" " " " " "
1	HD-1246	1-7/16" " " " " "

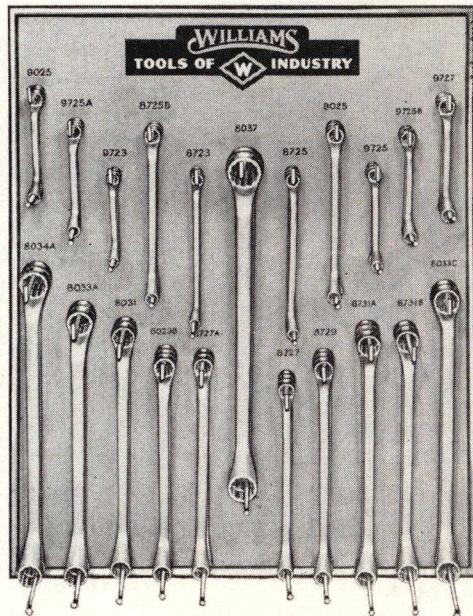
WILLIAMS' TOOL DISPLAY BOARDS

(24 x 30 Inches)



No. 104

Weight, Board Only—18.8 lbs.
Weight, Tools Only—22 lbs.



No. 105

Weight, Board Only—18.8 lbs.
Weight, Tools Only—24.5 lbs.

CONTENTS

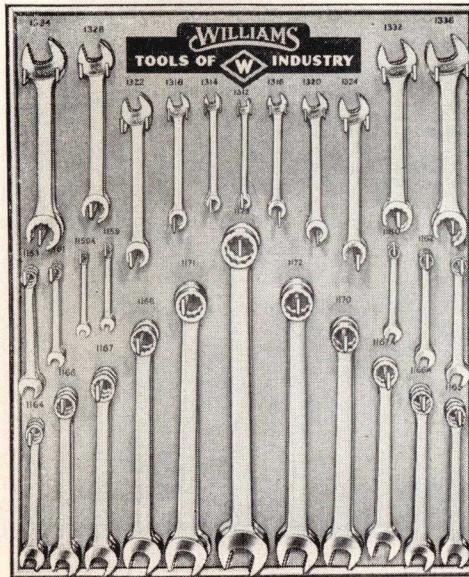
Quan.	No.	Description
3	7723	15° Box 3/8 & 7/16"
3	7025	15° Box 1/2 & 19/32"
3	7725	15° Box 7/16 & 1/2"
3	7725B	15° Box 1/2 & 9/16"
3	7727	15° Box 9/16 & 5/8"
3	7727A	15° Box 5/8 & 11/16"
3	7029B	15° Box 11/16 & 3/4"
3	7729	15° Box 5/8 & 3/4"
2	7731A	15° Box 3/4 & 7/8"
2	7031	15° Box 25/32 & 7/8"
2	7731B	15° Box 13/16 & 7/8"
2	7033A	15° Box 7/8 & 15/16"
2	7033C	15° Box 15/16 & 1"
2	7034A	15° Box 15/16 & 1-1/16"
1	7037	15° Box 1-1/16 & 1-1/4"
2	6723	Short Box 3/8 & 7/16"
2	6725	Short Box 7/16 & 1/2"
2	6725A	Short Box 7/16 & 9/16"
2	6725B	Short Box 1/2 & 9/16"
2	6025	Short Box 1/2 & 19/32"
2	6727	Short Box 9/16 & 5/8"

CONTENTS

Quan.	No.	Description
3	8723	45° Box 3/8 & 7/16"
3	8725	45° Box 7/16 & 1/2"
3	8025	45° Box 1/2 & 19/32"
3	8725B	45° Box 1/2 & 9/16"
3	8727	45° Box 9/16 & 5/8"
3	8727A	45° Box 5/8 & 11/16"
3	8729	45° Box 5/8 & 3/4"
3	8029B	45° Box 11/16 & 3/4"
2	8031	45° Box 25/32 & 7/8"
2	8731A	45° Box 3/4 & 7/8"
2	8731B	45° Box 13/16 & 7/8"
2	8033A	45° Box 7/8 & 15/16"
2	8033C	45° Box 15/16 & 1"
2	8034A	45° Box 15/16 & 1-1/16"
1	8037	45° Box 1-1/16 & 1-1/4"
2	9723	45° Short 3/8 & 7/16"
2	9725	45° Short 7/16 & 1/2"
2	9725A	45° Short 7/16 & 9/16"
2	9725B	45° Short 1/2 & 9/16"
2	9025	45° Short 1/2 & 19/32"
2	9727	45° Short 9/16 & 5/8"

WILLIAMS' TOOL DISPLAY BOARDS

(24 x 30 Inches)

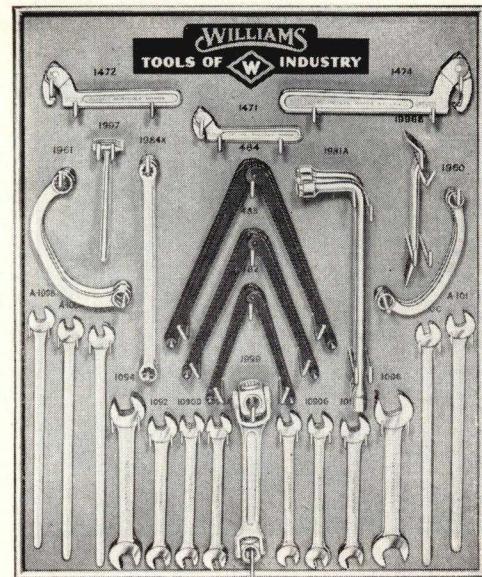


No. 106

Weight, Board Only—18.5 lbs.
Weight, Tools Only—37.9 lbs.

CONTENTS

Quan.	No.	Description
2	1159	Open End Box 5/16 & 5/16"
2	1159A	Open End Box 11/32 & 11/32"
3	1160	Open End Box 3/8 & 3/8"
3	1161	Open End Box 7/16 & 7/16"
3	1162	Open End Box 1/2 & 1/2"
3	1163	Open End Box 9/16 & 9/16"
2	1163A	Open End Box 19/32 & 19/32"
3	1164	Open End Box 5/8 & 5/8"
2	1165	Open End Box 11/16 & 11/16"
2	1166	Open End Box 3/4 & 3/4"
2	1166A	Open End Box 25/32 & 25/32"
2	1167	Open End Box 7/8 & 7/8"
2	1167A	Open End Box 13/16 & 13/16"
2	1168	Open End Box 15/16 & 15/16"
2	1170	Open End Box 1 & 1"
2	1171	Open End Box 1-1/16 & 1-1/16"
2	1172	Open End Box 1-1/8 & 1-1/8"
2	1173	Open End Box 1-1/4 & 1-1/4"
2	1312	Flare Nut 3/8 & 3/8"
2	1314	Flare Nut 7/16 & 7/16"
2	1316	Flare Nut 1/2 & 1/2"
2	1318	Flare Nut 9/16 & 9/16"
2	1320	Flare Nut 5/8 & 5/8"
2	1322	Flare Nut 11/16 & 11/16"
2	1324	Flare Nut 3/4 & 3/4"
2	1328	Flare Nut 7/8 & 7/8"
2	1332	Flare Nut 1 & 1"
2	1334	Flare Nut 1-1/16 & 1-1/16"
2	1336	Flare Nut 1-1/8 & 1-1/8"



No. 107

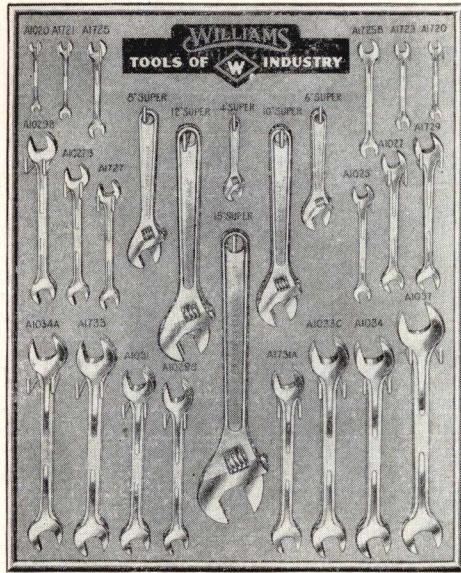
Weight, Board Only—19 lbs.
Weight, Tools Only—19.5 lbs.

CONTENTS

Quan.	No.	Description
3	1090	Tappet Wrench 7/16 & 1/2"
3	1090A	Tappet Wrench 3/8 & 7/16"
3	1090D	Tappet Wrench 1/2 & 9/16"
3	1090G	Tappet Wrench 7/16 & 17/32"
3	1092	Tappet Wrench 9/16 & 5/8"
3	1092F	Tappet Wrench 5/8 & 11/16"
3	1094	Tappet Wrench 3/4 & 7/8"
3	1096	Tappet Wrench 15/16 & 1"
3	A100	Tappet Wrench 7/16" Opening
3	A100A	Tappet Wrench 1/2" Opening
3	A100B	Tappet Wrench 9/16" Opening
3	A100C	Tappet Wrench 3/8" Opening
3	A101	Tappet Wrench 5/8" Opening
1	1999	"Multisocket" Wrench
1	1997	Brake Wrench
2	1960	Starter and Manifold Wrench
2	1961	Starter and Manifold Wrench
2	1984X	Ford Brake Wrench
3	1998B	Bendix Brake Wrench
2	1981A	Ford Conn. Rod Wrench
1	1471	Adjustable Hook Spanner
1	1472	Adjustable Hook Spanner
1	1474	Adjustable Hook Spanner
1	482	Adjustable Face Spanner
1	483	Adjustable Face Spanner
1	484	Adjustable Face Spanner

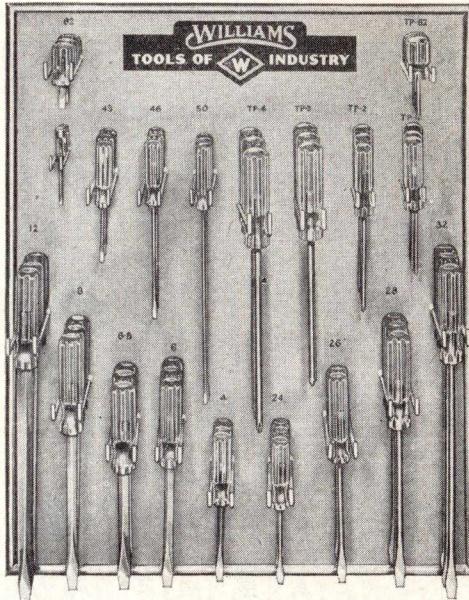
DROP-FORGINGS AND WILLIAMS DROP-FORGED TOOLS

WILLIAMS' TOOL DISPLAY BOARDS
(24 x 30 Inches)



No. 108

Weight, Board Only—18.8 lbs.
Weight, Tools Only—27 lbs.



No. 109

Weight, Board Only—20 lbs.
Weight, Tools Only—16.8 lbs.

CONTENTS

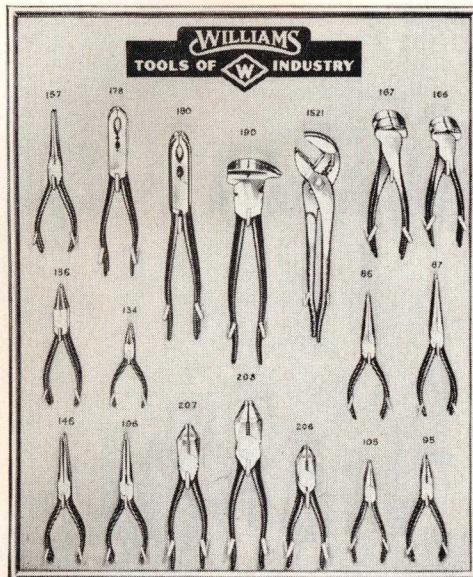
Qty.	No.	Description
2	A1020	Open End Wrench 1/4 & 5/16"
2	A1720	Open End Wrench 5/16 & 11/32"
2	A1721	Open End Wrench 5/16 & 3/8"
3	A1723	Open End Wrench 3/8 & 7/16"
3	A1725	Open End Wrench 7/16 & 1/2"
3	A1725B	Open End Wrench 1/2 & 9/16"
2	A1025	Open End Wrench 1/2 & 19/32"
3	A1727	Open End Wrench 9/16 & 5/8"
2	A1027	Open End Wrench 19/32 & 11/16"
2	A1027B	Open End Wrench 5/8 & 11/16"
3	A1729	Open End Wrench 5/8 & 3/4"
2	A1029B	Open End Wrench 11/16 & 3/4"
2	A1029C	Open End Wrench 11/16 & 13/16"
2	A1731A	Open End Wrench 3/4 & 7/8"
2	A1031	Open End Wrench 25/32 & 7/8"
2	A1033C	Open End Wrench 15/16 & 1"
2	A1733	Open End Wrench 7/8 & 1"
2	A1034	Open End Wrench 7/8 & 1-1/16"
1	A1034A	Open End Wrench 15/16 & 1-1/16"
1	A1037	Open End Wrench 1-1/16 & 1-1/4"
3	4"	"Superjustable" Wrench.....
3	6"	"Superjustable" Wrench.....
3	8"	"Superjustable" Wrench.....
3	10"	"Superjustable" Wrench.....
2	12"	"Superjustable" Wrench.....
1	15"	"Superjustable" Wrench.....

CONTENTS

Qty.	No.	Description
3	4	Screw Driver 4" Square Blade
3	6	Screw Driver 6" Square Blade
3	6B	Screw Driver 6" Square Blade
3	8	Screw Driver 8" Square Blade
3	12	Screw Driver 12" Square Blade
3	24	Screw Driver 4" Round Blade
3	26	Screw Driver 6" Round Blade
3	28	Screw Driver 8" Round Blade
3	32	Screw Driver 12" Round Blade
3	43	3" Electricians' Screw Driver
3	46	6" Electricians' Screw Driver
3	50	10" Electricians' Screw Driver
3	52	Pocket Screw Driver
3	62	Regular Stubby
3	TP-1	3" Phillips Screw Driver
3	TP-2	4" Phillips Screw Driver
3	TP-3	6" Phillips Screw Driver
3	TP-4	8" Phillips Screw Driver
3	TP-62	Phillips Stubby

WILLIAMS' TOOL DISPLAY BOARDS

(24 x 30 Inches)



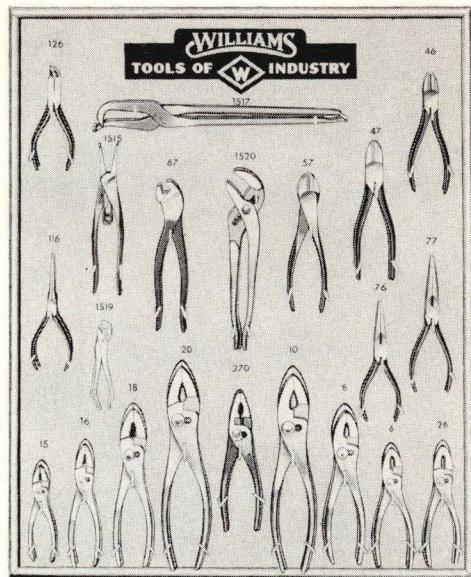
No. 110

Weight, Board Only—17.8 lbs.

Weight, Tools Only—25.8 lbs.

CONTENTS

Quan.	No.	Description
2	1521	Heavy Duty "Superplier".....
2	86	6" Chain Nose Pliers no cutter
2	87	7" Chain Nose Pliers no cutter
2	95	5" Chain Nose Pliers with cutter
2	105	5" Chain Nose Pliers, no cutter
2	134	4" Round Nose Pliers.....
2	136	6" Round Nose Pliers.....
2	146	6" Duck Bill Pliers.....
2	157	7" Duck Bill Pliers.....
2	166	6" End Cutting Nippers.....
2	167	7" End Cutting Nippers.....
2	178	8" Gas and Burner Pliers.....
2	180	10" Gas and Burner Pliers.....
2	190	10" Fence Pliers.....
2	196	6" Flat Nose Pliers with cutter
2	206	6" Linemen's Pliers.....
2	207	7" Linemen's Pliers.....
2	208	8" Linemen's Pliers.....



No. 110A

Weight, Board Only—17.3 lbs.

Weight, Tools Only—22.7 lbs.

CONTENTS

Quan.	No.	Description
2	1515	8" Lock Ring Pliers.....
2	1517	13" Brake Pliers.....
2	1519	Midget "Superpliers".....
2	1520	Standard "Superpliers".....
2	6	6" Combination Slip-Joint Pliers
2	8	8" Combination Slip-Joint Pliers
2	10	10" Combination Slip-Joint Pliers
2	370	7" Slip-Joint Pliers with Cutter
*2	15	5" Thin Nose Combination Pliers
2	16	6" Thin Nose Combination Pliers
*2	18	8" Thin Nose Combination Pliers
*2	20	10" Thin Nose Combination Pliers
*2	26	6" 30° Bent Nose Combination Pliers
2	46	6" Diagonal Cutting Pliers
2	47	7" Diagonal Cutting Pliers
2	57	7" High Leverage Cutting Pliers
2	67	7" Battery Pliers
2	76	6" Chain Nose Pliers with Cutter
2	77	7" Chain Nose Pliers with Cutter
2	116	6" Long Needle Nose Pliers
2	126	6" Bent Needle Nose Pliers

* Not yet available.

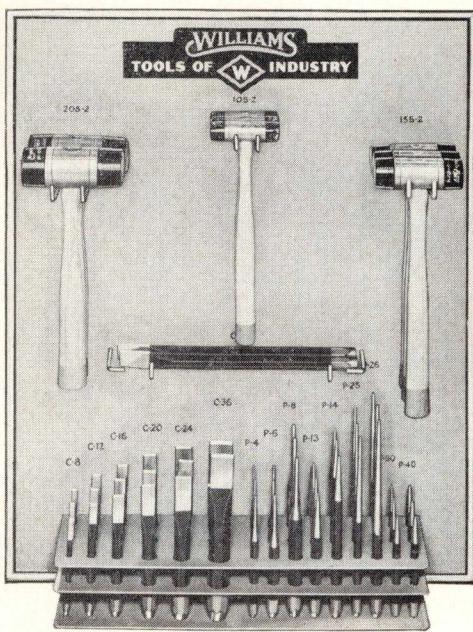
DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

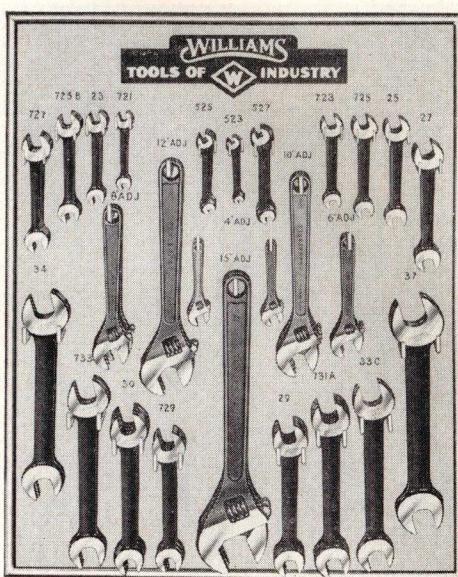
WILLIAMS' TOOL DISPLAY BOARDS

(24 x 30 Inches)



No. 111

Weight, Board Only—23.5 lbs.
Weight, Tools Only—28.4 lbs.



No. 115

Weight, Board Only—18.8 lbs.
Weight, Tools Only—46 lbs.

CONTENTS

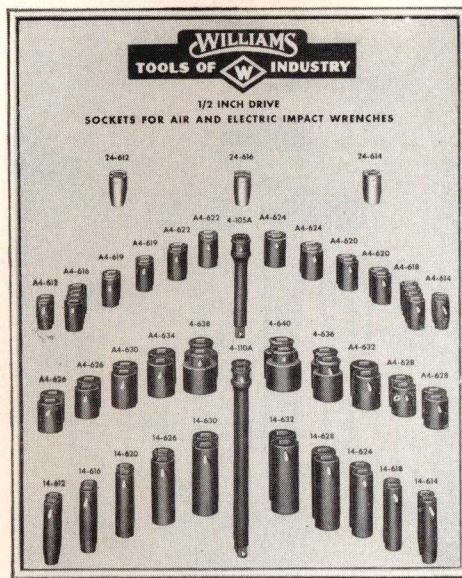
Qty.	No.	Description
3	P-4	1/8" Pin Punch.....
3	P-6	3/16" Pin Punch.....
3	P-8	1/4" Pin Punch.....
3	P-13	3/32" Solid Punch.....
3	P-14	1/8" Solid Punch.....
3	P-25	5/32" Long Taper Punch.....
3	P-26	3/16" Long Taper Punch.....
3	P-30	Prick Punch.....
3	P-40	Center Punch.....
3	C-8	1/4" Cold Chisel.....
3	C-12	3/8" Cold Chisel.....
3	C-16	1/2" Cold Chisel.....
3	C-20	5/8" Cold Chisel.....
3	C-24	3/4" Cold Chisel.....
3	C-36	1-1/8" Cold Chisel.....
2	C-422	11/16" Rivet Buster.....
2	105-2	8 oz. Soft-Face Hammer.....
2	155-2	1-1/4 lbs. Soft-Face Hammer.....
2	205-2	2 lb. Soft-Face Hammer.....

CONTENTS

Qty.	No.	Description
4	721	Carbon Open End Wr. 5/16 & 3/8"
4	723	Carbon Open End Wr. 3/8 & 7/16"
4	23	Carbon Open End Wr. 13/32 & 1/2"
4	725	Carbon Open End Wr. 7/16 & 1/2"
4	725B	Carbon Open End Wr. 1/2 & 9/16"
4	25	Carbon Open End Wr. 1/2 & 19/32"
4	727	Carbon Open End Wr. 9/16 & 5/8"
4	27	Carbon Open End Wr. 19/32 & 11/16"
4	729	Carbon Open End Wr. 5/8 & 3/4"
4	29	Carbon Open End Wr. 11/16 & 25/32"
4	30	Carbon Open End Wr. 11/16 & 7/8"
4	731A	Carbon Open End Wr. 3/4 & 7/8"
2	733	Carbon Open End Wr. 7/8 & 1"
2	33C	Carbon Open End Wr. 15/16 & 1"
2	34	Carbon Open End Wr. 7/8 & 1-1/16"
2	37	Carbon Open End Wr. 1-1/16 & 1-1/4"
4	523	Carbon Set Screw Wr. 3/16 & 1/4"
4	525	Carbon Set Screw Wr. 1/4 & 5/16"
4	527	Carbon Set Screw Wr. 5/16 & 3/8"
4	4"	Carbon Adjustable Wrench
4	6"	Carbon Adjustable Wrench
4	8"	Carbon Adjustable Wrench
4	10"	Carbon Adjustable Wrench
2	12"	Carbon Adjustable Wrench
2	15"	Carbon Adjustable Wrench

WILLIAMS' IMPACT SOCKET DISPLAY BOARDS

(24 x 30 Inches)



No. 116

Weight, Board Only—18.8 lbs.
Weight, Tools Only—28.3 lbs.

CONTENTS

Quan.	No.	Description
2	A4-612	3/8" Alternate Hex Socket . . .
2	A4-614	7/16" Alternate Hex Socket . . .
4	A4-616	1/2" Alternate Hex Socket . . .
4	A4-618	9/16" Alternate Hex Socket . . .
4	A4-619	19/32" Alternate Hex Socket . . .
4	A4-620	5/8" Alternate Hex Socket . . .
4	A4-622	11/16" Alternate Hex Socket . . .
4	A4-624	3/4" Alternate Hex Socket . . .
4	A4-626	13/16" Alternate Hex Socket . . .
4	A4-628	7/8" Alternate Hex Socket . . .
2	A4-630	15/16" Alternate Hex Socket . . .
2	A4-632	1" Alternate Hex Socket . . .
2	A4-634	1-1/16" Alternate Hex Socket . . .
2	4-636	1-1/8" Standard Hex Socket . . .
2	4-638	1-3/16" Standard Hex Socket . . .
2	4-640	1-1/4" Standard Hex Socket . . .
2	14-612	3/8" Bolt Cl. Hex Socket . . .
2	14-614	7/16" Bolt Cl. Hex Socket . . .
2	14-616	1/2" Bolt Cl. Hex Socket . . .
2	14-618	9/16" Bolt Cl. Hex Socket . . .
2	14-620	5/8" Bolt Cl. Hex Socket . . .
2	14-624	3/4" Bolt Cl. Hex Socket . . .
2	14-626	13/16" Bolt Cl. Hex Socket . . .
2	14-628	7/8" Bolt Cl. Hex Socket . . .
2	14-630	15/16" Bolt Cl. Hex Socket . . .
2	14-632	1" Bolt Cl. Hex Socket . . .
2	24-612	3/8" Self Tapping Socket . . .
2	24-614	7/16" Self Tapping Socket . . .
2	24-616	1/2" Self Tapping Socket . . .
2	4-105A	1/2" Drive Extension, 5" . . .
2	4-110A	1/2" Drive Extension, 10" . . .



No. 117

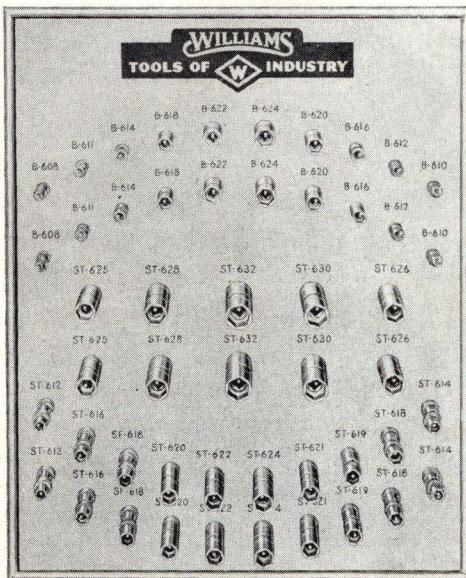
Weight, Board Only—17.1 lbs.
Weight, Tools Only—36 lbs.

CONTENTS

Quan.	No.	Description
3	5-618	9/16" Standard Hex Socket . . .
3	5-620	5/8" Standard Hex Socket . . .
3	5-622	11/16" Standard Hex Socket . . .
3	5-624	3/4" Standard Hex Socket . . .
3	5-625	25/32" Standard Hex Socket . . .
3	5-626	13/16" Standard Hex Socket . . .
3	5-628	7/8" Standard Hex Socket . . .
3	5-630	15/16" Standard Hex Socket . . .
3	5-632	1" Standard Hex Socket . . .
2	5-634	1-1/16" Standard Hex Socket . . .
2	5-636	1-1/8" Standard Hex Socket . . .
2	5-640	1-1/4" Standard Hex Socket . . .
3	15-618	9/16" Bolt Cl. Hex Socket . . .
3	15-620	5/8" Bolt Cl. Hex Socket . . .
3	15-624	3/4" Bolt Cl. Hex Socket . . .
3	15-626	13/16" Bolt Cl. Hex Socket . . .
3	15-628	7/8" Bolt Cl. Hex Socket . . .
3	15-630	15/16" Bolt Cl. Hex Socket . . .
3	15-632	1" Bolt Cl. Hex Socket . . .
2	15-634	1-1/16" Bolt Cl. Hex Socket . . .
3	5-106A	5/8" Drive Extension, 6" . . .
3	5-110A	5/8" Drive Extension, 10" . . .

WILLIAMS' TOOL DISPLAY BOARDS

(24 x 30 Inches)

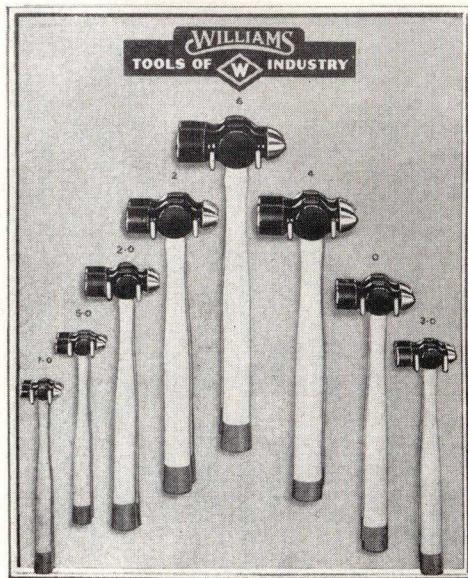


No. 118

**Weight, Board Only—16.4 lbs.
Weight, Tools Only—13 lbs.**

CONTENTS

Quan.	No.	Description
4	B-608	1/4" 6-Point Socket
4	B-610	5/16" 6-Point Socket
4	B-611	11/32" 6-Point Socket
4	B-612	3/8" 6-Point Socket
4	B-614	7/16" 6-Point Socket
4	B-616	1/2" 6-Point Socket
4	B-618	9/16" 6-Point Socket
4	B-620	5/8" 6-Point Socket
4	B-622	11/16" 6-Point Socket
4	B-624	3/4" 6-Point Socket
4	ST-612	3/8" 6-Point Socket
4	ST-614	7/16" 6-Point Socket
4	ST-616	1/2" 6-Point Socket
4	ST-618	9/16" 6-Point Socket
4	*SF-618	9/16" 6-Point Socket
4	ST-619	19/32" 6-Point Socket
4	ST-620	5/8" 6-Point Socket
4	ST-621	21/32" 6-Point Socket
4	ST-622	11/16" 6-Point Socket
4	ST-624	3/4" 6-Point Socket
4	ST-625	25/32" 6-Point Socket
4	ST-626	13/16" 6-Point Socket
4	ST-628	7/8" 6-Point Socket
4	ST-630	15/16" 6-Point Socket
4	ST-632	1" 6-Point Socket



No. 114

Weight, Board Only—16.1 lbs.

CONTENTS

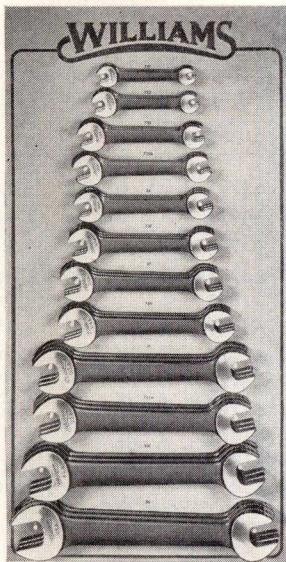
Quantity	No.	Description
2	7-0	2 oz. Ball Pein Hammer
2	5-0	1/4 lb. Ball Pein Hammer
2	3-0	1/2 lb. Ball Pein Hammer
2	2-0	3/4 lb. Ball Pein Hammer
2	0	1 lb. Ball Pein Hammer
2	2	1-1/2 lb. Ball Pein Hammer
2	4	2 lb. Ball Pein Hammer
2	6	2-1/2 lb. Ball Pein Hammer

* All Ford 6, Ford-Mercury V-8, 85 HP, 90 HP and 100 HP Connecting Rods. Use with Torque wrench required on models having "Marsden" self-locking nuts. Not guaranteed because of extra thin walls.

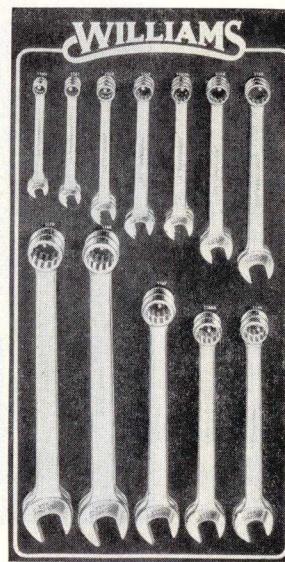
WILLIAMS' WRENCH DISPLAY BOARDS

Uniform size and style makes possible endless combinations for walls, counters or windows. Set up a complete Wrench Department at no cost. Displays are furnished at cost of tools only. Wrench sizes are the most commonly used and asked for.

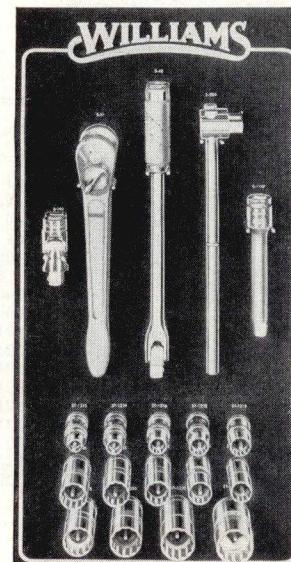
Each panel measures 1/2" x 12" x 24" except No. 7 which measures 3/4" x 16" x 24". Nos. 1 and 11 are finished in bright Williams' orange, all others in rich maroon lacquer.



No. 1



No. 2



No. 3

**DOUBLE HEAD
OPEN-END
CARBON WRENCHES**

Total Weight, 22 lbs.

CONTENTS

No.	Qty.	Size
721	3	5/16 & 3/8"
723	3	3/8 & 7/16"
725	3	7/16 & 1/2"
725B	3	1/2 & 9/16"
25	3	1/2 & 19/32"
27	3	19/32 & 11/16"
727	3	9/16 & 5/8"
729	3	5/8 & 3/4"
731A	3	3/4 & 7/8"
31	3	25/32 & 7/8"
33C	3	15/16 & 1"
34	3	7/8 & 1-1/16"

**COMBINATION
OPEN-END BOX
ALLOY
"SUPERRENCHES"**

Total Weight, 17.5 lbs.

CONTENTS

No.	Qty.	Size
1160	3	3/8 & 3/8"
1161	3	7/16 & 7/16"
1162	3	1/2 & 1/2"
1163	3	9/16 & 9/16"
1163A	3	19/32 & 19/32"
1164	3	5/8 & 5/8"
1165	2	11/16 & 11/16"
1166	2	3/4 & 3/4"
1166A	2	25/32 & 25/32"
1167	2	7/8 & 7/8"
1168	2	15/16 & 15/16"
1170	2	1 & 1"

**STANDARD 1/2" SQ. DR.
ALLOY
"SUPERSOCKETS"
and PARTS**

Total Weight, 21.3 lbs.

CONTENTS

No.	Qty.	Size
S-20A	2	Sliding T Handle
S-40	2	Flex. Handle
S-51	2	Reversible Ratchet
S-110P	2	Extension Bar
S-140	2	Universal Joint
ST-1212	2	3/8"
'ST-1214	2	7/16"
ST-1216	2	1/2"
ST-1218	2	9/16"
ST-1219	2	19/32"
ST-1220	2	5/8"
ST-1222	2	11/16"
ST-1224	2	3/4"
ST-1225	2	25/32"
ST-1226	2	13/16"
ST-1228	2	7/8"
ST-1230	2	15/16"
ST-1232	2	1"
ST-1234	2	1-1/16"

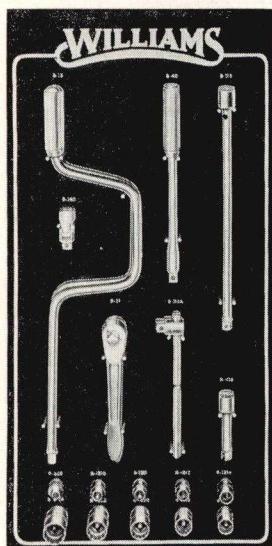
DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' WRENCH DISPLAY BOARDS

No. 4

BANTAM 3/8" SQUARE DRIVE
ALLOY "SUPERSOCKETS" and PARTS



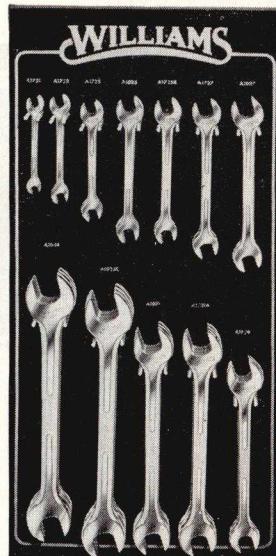
Total Weight, 13.5 lbs.

CONTENTS

No.	Qty.	Size
B-15	2	Speeder
B-20A	2	Sliding T Handle
B-40	2	Flex. Handle
B-51	2	Reversible Ratchet
B-108	2	Extension Bar
B-115	2	Extension Bar
B-140	2	Universal Joint
B-608	2	1/4"
B-1210	2	5/16"
B-1211	2	11/32"
B-1212	2	3/8"
B-1214	2	7/16"
B-1216	2	1/2"
B-1218	2	9/16"
B-1220	2	5/8"
B-1222	2	1/16"
B-1224	2	3/4"

No. 5

DOUBLE HEAD OPEN-END
ALLOY "SUPERRENCHES"



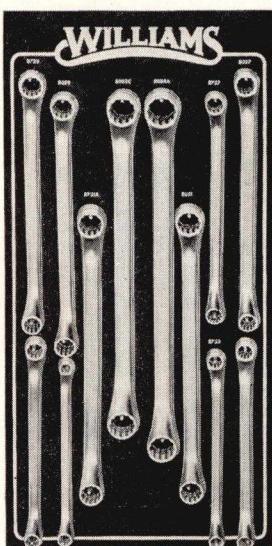
Total Weight, 18.4 lbs.

CONTENTS

No.	Qty.	Size
A1721	3	5/16 & 3/8"
A1723	3	3/8 & 7/16"
A1725	3	7/16 & 1/2"
A1725B	3	1/2 & 9/16"
A1025	3	1/2 & 19/32"
A1727	3	9/16 & 5/8"
A1027	3	19/32 & 11/16"
A1729	3	5/8 & 3/4"
A1731A	3	3/4 & 7/8"
A1031	3	25/32 & 7/8"
A1033C	3	15/16 & 1"
A1034	3	7/8 & 1-1/16"

No. 6

45° DOUBLE OFFSET BOX
ALLOY "SUPERRENCHES"



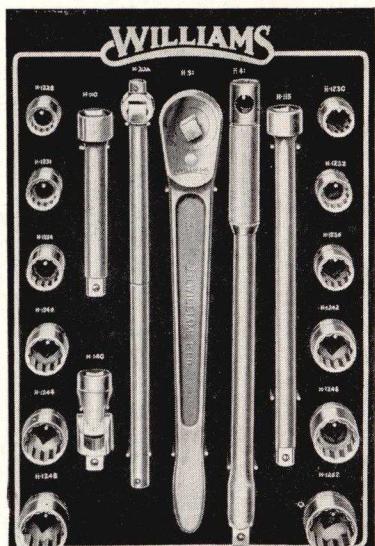
Total Weight, 25.9 lbs.

CONTENTS

No.	Qty.	Size
8723	3	3/8 & 7/16"
8725	3	7/16 & 1/2"
8725B	3	1/2 & 9/16"
8025	3	1/2 & 19/32"
8727	3	9/16 & 5/8"
8027	3	11/16 & 19/32"
8729	3	5/8 & 3/4"
8029	3	11/16 & 25/32"
8731A	3	3/4 & 7/8"
8031	3	25/32 & 7/8"
8033C	3	15/16 & 1"
8034A	3	15/16 & 1-1/16"

No. 7

HEAVY DUTY 3/4" SQUARE DRIVE
ALLOY "SUPERSOCKETS" and PARTS



Total Weight,
38.5 lbs.

CONTENTS

No.	Qty	Size
H-20A	1	Sliding T
H-41	1	Flex Hdl.
H-51	1	Ratchet
H-110	1	Ext. Bar
H-115	1	Ext. Bar
H-140	1	Univ.Jnt.
H-1228	1	7/8"
H-1230	1	15/16"
H-1231	1	31/32"
H-1232	1	1"
H-1234	1	1-1/16"
H-1236	1	1-1/8"
H-1240	1	1-1/4"
H-1242	1	1-5/16"
H-1244	1	1-3/8"
H-1246	1	1-7/16"
H-1248	1	1-1/2"
H-1252	1	1-5/8"

WILLIAMS' WRENCH DISPLAY BOARDS

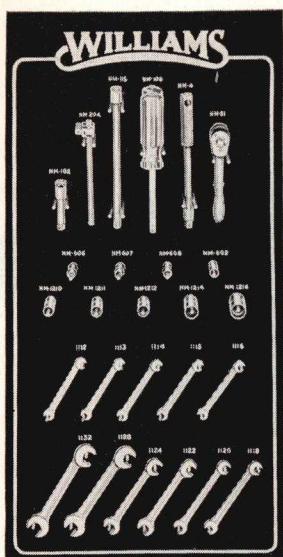
No. 8

MIDGET 1/4" DRIVE ALLOY "SUPERSOCKETS"
and PARTS—MIDGET "SUPERRENCHES"

Total Weight, 9 lbs.

CONTENTS

No.	Qty	Size
NM-20A	2	Sliding T
NM-42	2	Flex Handle
NM-51	2	Rev. Ratchet
NM-102	2	Ext. Bar
NM-106	2	Ext. Driver
NM-115	2	Ext. Bar
NM-606	2	3/16"
NM-607	2	7/32"
NM-608	2	1/4"
NM-609	2	9/32"
NM-1210	2	5/16"
NM-1211	2	11/32"
NM-1212	2	3/8"
NM-1214	2	7/16"
NM-1216	2	1/2"
1112	2	3/16 & 3/16"
1113	2	13/64 & 13/64"
1114	2	7/32 & 7/32"
1115	2	15/64 & 15/64"
1116	2	1/4 & 1/4"
1118	2	9/32 & 9/32"
1120	2	5/16 & 5/16"
1122	2	11/32 & 11/32"
1124	2	3/8 & 3/8"
1128	2	7/16 & 7/16"
1132	2	1/2 & 1/2"



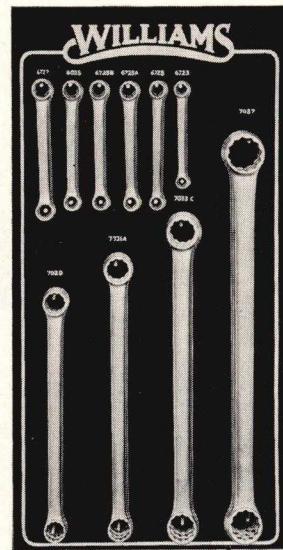
No. 9

15° DOUBLE OFFSET BOX
ALLOY "SUPERRENCHES"

Total Weight,
20.5 lbs.

CONTENTS

No.	Qty	Size
6723	3	3/8 & 7/16"
6725	3	7/16 & 1/2"
6725A	3	7/16 & 9/16"
6725B	3	1/2 & 9/16"
6025	3	1/2 & 19/32"
6727	3	9/16 & 5/8"
7029	3	11/16 & 25/32"
7731A	3	3/4 & 7/8"
7033C	3	15/16 & 1"
7037	3	1-1/16 & 1-1/4"



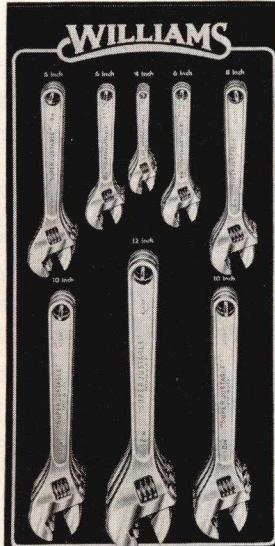
No. 10

ALLOY
"SUPERJUSTABLE" WRENCHES

Total Weight,
19.8 lbs.

CONTENTS

No.	Qty.	Capacity
4 Inch	6	1/2"
6 Inch	6	3/4"
8 Inch	6	15/16"
10 Inch	6	1-1/8"
12 Inch	3	1-5/16"



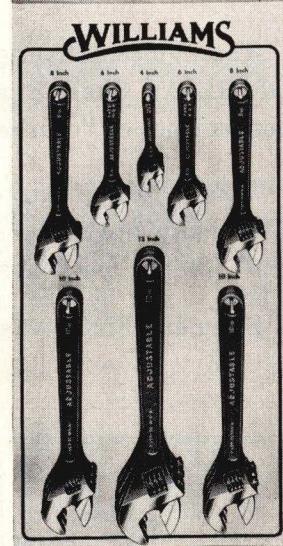
No. 11

CARBON
ADJUSTABLE WRENCHES

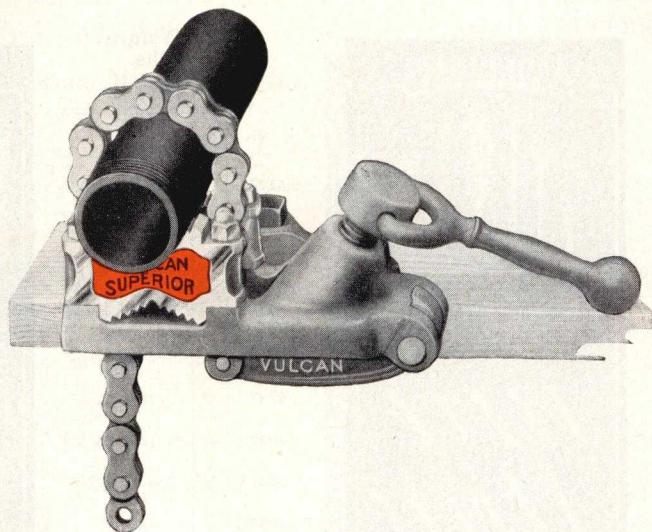
Total Weight,
19.5 lbs.

CONTENTS

No.	Qty.	Capacity
4 Inch	6	1/2"
6 Inch	6	3/4"
8 Inch	6	15/16"
10 Inch	6	1-1/8"
12 Inch	3	1-5/16"



WILLIAMS' + "VULCAN SUPERIOR"
DROP-FORGED CHAIN PIPE VISE



Points of Superiority

"Overhead" Adjustment—the handle is **on top** for easy operation.

Reversible Jaws—when the teeth first in use wear, simply remove the screws and turn the jaws over—double life.

Larger Capacity—each vise takes pipe 1/2" larger than other chain vises of similar size.

The "Vulcan Superior" Vise provides all the reliability of Williams' old "Vulcan"—the ORIGINAL Chain Pipe Vise and the favorite for more than 30 years—together with the convenience of "overhead" adjustment. Reversible jaws, too, for longer life.

Wholly made from tough wrought steel. **Drop-forged** base, jaws, handle and chain-arm. The chains are of the same unsurpassed quality as those of the widely established "Vulcan" Chain Pipe Tongs. Unbreakable, rapid in action, positive in grip. Fully guaranteed.

Standard Finish—jaws have bright face around orange panel.

Packed one in a box.

No.	For Pipe, Sizes	Weight Each, Lbs.	Extra Parts, Weight Each, Lbs.					No.
			Jaws in Pairs	Chain without Arm	Chain Arm Only	Handle with Screw	Adjusting Screw Only	
11	1/8 to 2 1/2	7	1.1	1.1	.38	.88	.38	11
12	1/4 to 4 1/2	15	2.8	2.1	.81	1.6	.81	12

♦ REGISTERED TRADE MARK

1-52

WILLIAMS' GENUINE ♦ "VULCAN"
THE ORIGINAL
DROP-FORGED CHAIN PIPE VISE

For Holding Pipe, Bolts, Bars, Shafts, etc., from 1/8 to 8 inches in Diameter



Standard Finish —
jaws have bright
face around orange
panel.

These Vises are unbreakable, light, compact, rapid in action and positive in gripping pipe. All are readily fastened to bench or post. The smaller sizes are well adapted for carrying by hand or in tool bag.

Adjustment is quickly effected by engaging the projecting rivets of the chain with a series of stepped bosses on the base, when the vise may be instantly locked in an unbreakable grip by a turn of the handle.

They are made entirely of wrought steel; the drop-forged jaws are of saw-tempered steel for file-sharpening. The chains are of same quality as those of our "Vulcan" Chain Pipe Tongs; all parts are fully guaranteed and replacements carried in stock.

All Vises are packed in individual boxes for convenient shelving. Six of Nos. 1 and 2 boxes to a carton.

Orders for Chains take Screw also, unless otherwise specified.

No.	For Pipe, Sizes	Size, Folded for Packing	Wgt. Each, Lbs.	Extra Parts, Weight Each, Lbs.						No.
				Jaws in Pairs	Chain with Screw	Chain Screw Only	Handle with Nut	Handle Only	Nut Only	
1	1/8 to *2	4 x 5 x 6	4	.63	1.1	.25	.75	.44	.25	1
2	1/4 to 4	6 x 8 x 8	10	2.5	2.4	.50	1.3	.75	.56	2
3	1/4 to 6	8 x 9 x 11	18	4.9	4.7	.81	1.9	1.	.88	3
4	1/4 to 8	8 x 10 x 12	30	8.4	6.1	.81	1.9	1.	.88	4

* Will grip pipe fittings not larger in diameter than Std. 2-1/2" pipe (2-7/8" O.D.).

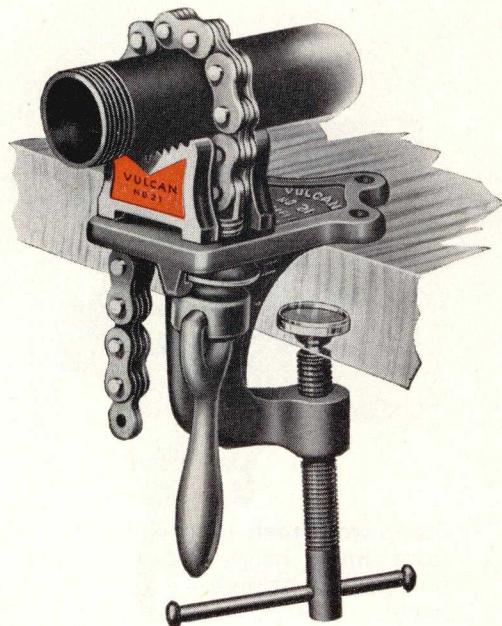
♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "VULCAN"
CLAMP KIT VISE NO. 21

For Pipe 1/8 to 2 inches

RAPID ACTION
POSITIVE GRIP

RIGID
COMPACT
LIGHT



This Clamp Kit Vise can be readily and firmly attached to bench, post, or other support without the use of bolts, or screws. Easily carried; weighs only 5-3/4 lbs.

The clamping device is very efficient. The clamp member is integral with the base; the clamp-screw, set at a slight forward angle (as illustrated), carries a swivel with thin V lip projecting from its upper edge. Consequently, the Vise can be securely and rigidly attached to support.

The drop-forged jaws are saw-tempered for file-sharpening. Chains are of the same superior quality as those in Williams' "Vulcan" Tongs. Jaws, chain, nut and handle are interchangeable with similar parts of "Vulcan" Vise" No. 1.

Packed one in a box for convenient shelving.

Standard Finish—jaws have bright face around orange panel.

Orders for Chains take Screw also, unless otherwise specified.

No.	For Pipe, Sizes	Weight Each, Lbs.	EXTRA PARTS, Weight Each, Lbs.						No.
			Jaws in Pairs	Chain with Screw	Chain Screw Only	Handle with Nut	Nut Only	Clamp Screw & Swivel	
21	1/8 to *2"	5 3/4	.63	1.1	.25	.75	.25	.56	21

* Will grip pipe fittings not larger in diameter than Std. 2-1/2" pipe (2-7/8" O.D.).

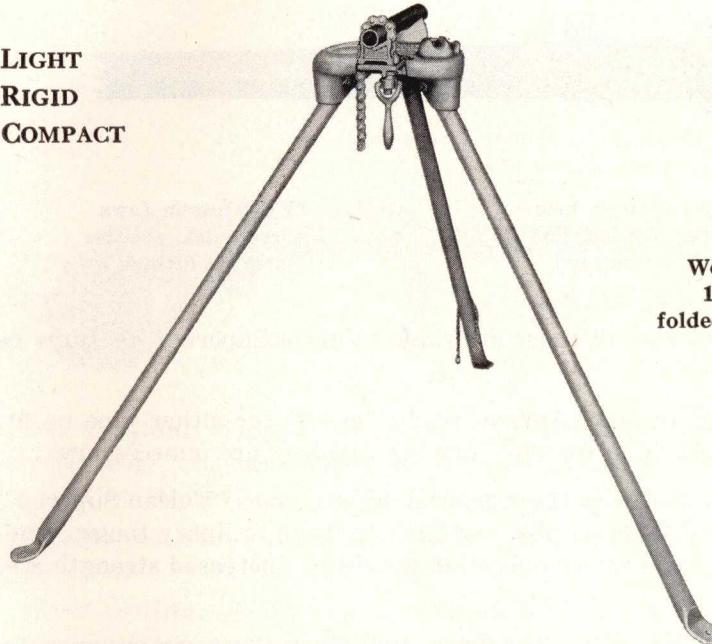
1-52

♦ REGISTERED TRADE MARK

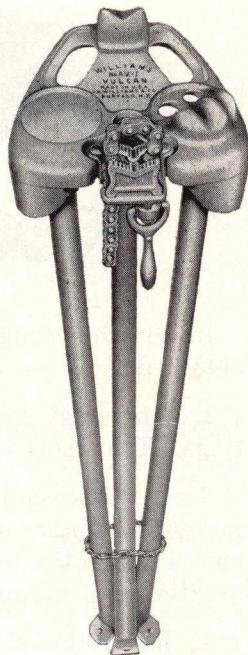
WILLIAMS' ♦ "VULCAN"
ALUMINUM VISE STAND No. AV-1

*A new light weight combination
vise, stand and pipe bender.*

**LIGHT
RIGID
COMPACT**



**Weighs Only
18-3/4 lbs.
folded for carrying**



This new Aluminum Vise Stand has all the advantages of rigidity and strength found in heavier iron or steel types combined with light weight. There is no sacrifice of efficiency or performance yet weight is reduced nearly 50%.

Base is made from special aluminum alloy which has high tensile and high impact properties. Its heavily reinforced design prevents distortion under severe service. Recess for oil can and handy slots for tools are provided in addition to the "V" pipe support in rear.

Pipe Benders are provided in two sizes. One handles pipe up to 1/2 inch, the other handles pipe up to 3/4 inch.

Legs are 1-1/2" special aluminum alloy tubing. Upset feet are punched for fastening to floor, if desired, although they provide firm, stable support without such fastening. Legs may be folded and tied together with permanently attached chain for easy carrying.

Vise is "Vulcan" No. 1 with all its time tested features as described on Page 155 except it has satin aluminum finish.

Finish—entire assembly has satin aluminum finish.

All parts of Vise and Stand are interchangeable.

Vise Stand No.	For Pipe Sizes	Weight, Lbs.		No. 1 "Vulcan" Vise Parts, Weight Each, Lbs.					
		Vise Only	Stand Complete	Jaws in Pairs	Chain with Screw	Chain Screw Only	Handle with Nut	Handle Only	Nut Only
AV-1	1/8 to *2"	4	18-3/4	.63	1.1	.25	.75	.44	.25

* Will grip pipe fittings not larger in diameter than Std. 2-1/2" pipe (2-7/8" O.D.).

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "VULCAN SUPERIOR"
DROP-FORGED PIPE-AND-FITTINGS TONGS

For Both Pipe and Fittings, 1/8 to 12 in.



In no other tongs on the market can all these desirable "Vulcan Superior" features be obtained:

1. **Universal Service**—Two tools in one. Always ready "as is" for either pipe or fittings. Two tools as commonly used (one for pipe, one for fittings) are unnecessary.

2. **"V" Recess** in the jaws, combined with their general design, gives "Vulcan Superior" a greater number of grips or "bites," both on pipe and fittings, than ordinary tongs. One-spot wear on the teeth is prevented and easier operation provided. Increased strength and greater ease in handling results.

3. **Reversible** pipe-and-fittings jaws. When the teeth first in use wear, simply unscrew the bolt and turn the jaws end-for-end.

4. **Chains**—Either Flat Link Chain, or Cable Chain, (except No. 0) as desired.

5. **Proof-Testing.** Each Flat Link Chain is individually "proof-tested" on a standard tension machine *to two-thirds of its breaking strain*. Every chain so tested is stamped **•** on the drop-forged swinging-link and to it is attached a leaden seal, bearing our trade mark **◇W**. Every Flat Link Chain leaving our works must bear this mark and seal—the Proof of Quality—as evidence that it has passed our standardized proof-tests.

Wholly made from tough wrought steel; all parts are interchangeable.

Standard finish—jaws have bright face, orange panel.

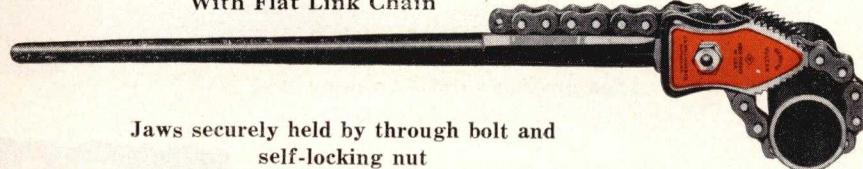
Number	0	1	2	3	3 1/2	4	5
For Pipe and Fittings, inches.	1/8 to 3/4	1/8 to 1 1/2	1/4 to 2 1/2	3/4 to 4	1 to 6	1 1/2 to 8	2 to 12
Extreme Length	13 3/4	20	27	37	44 1/2	50 1/2	64 1/2
Weight, lbs.	2	5 1/2	10	17	26	34	54
Standard Flat Link Chain,							
Length	9 1/2	13 1/2	17 1/2	22 1/2	32	40 1/2	55 1/2
Breaking Strain, lbs.	3,600	6,700	9,800	12,500	14,300	15,700	21,800
Extra Std. Flat Chain Wt.Ea.	.31	1.	1.8	3.5	5.3	7.8	14.2
Cable Chain,							
Length	14 1/2	18	27	33 1/2	42	57	
Breaking Strain, lbs.	6,000	9,000	12,500	14,300	15,700	21,800	
Extra Cable Chain Wt., Ea.	1.	1.9	4.3	6.2	8.6	14.8	
†Extra Jaws, Weight per Pair	.75	1.3	2.3	4.	5.5	7.4	10.
Ex. Bolt and Nut, Wt. per Set	.06	.13	.19	.25	.44	.50	.75

† Extra Jaws supplied in pairs unless otherwise called for. If only a single jaw is wanted, specify Right or Left.

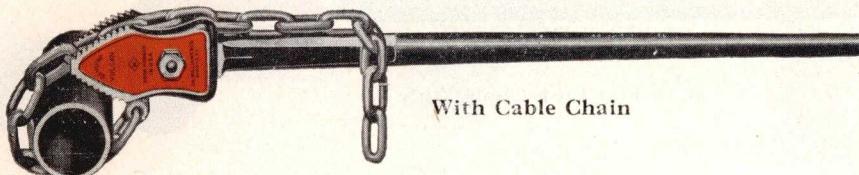
WILLIAMS' GENUINE ♦ "VULCAN"
DROP-FORGED CHAIN PIPE TONGS

For Turning, or Holding 1/8 to 18 in. Pipe

With Flat Link Chain



Jaws securely held by through bolt and self-locking nut



With Cable Chain

The Original "Vulcan," introduced by Williams over fifty years ago, is still the oil-fields' favorite tongs for general work. All "Vulcans" are made entirely from tough wrought steel and are fully guaranteed.

Chains swing from the center and can be used on either side of the jaws, thus reducing to the minimum, wear upon specific teeth.

Proof-testing. To insure proper service, each Flat Link Chain is "*proof-tested*" in a standard tension machine to *two-thirds of its breaking strain* listed in table. Each Chain, so tested, is stamped **O** on the drop-forged swinging link and to it is attached a leaden seal bearing our trademark **W** thus absolutely establishing the safety-factor and reliability of every tong.

The jaws are fastened to the handle by extra size through bolt and nut.

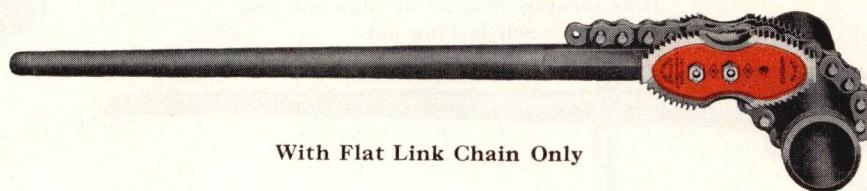
Standard finish—jaws have bright face around orange panel.

Number	10	11	12	13	13 1/2	14	15	16
Capacity								
Size Pipe, inches.....	{ 1/8 to 3/4	{ 1/8 to 1 1/2	{ 1/4 to 2 1/2	{ 3/4 to 4	{ 1 to 6	{ 1 1/2 to 8	{ 2 to 12	{ 4 to 18
Extreme Length.....	13 3/4	20	27	37	44 1/2	50 1/2	64 1/2	87
Weight, lbs.....	2	5 3/4	10	17	24	31	52	137
Flat Standard Chain								
Length.....	9 1/2	13 1/2	17 1/2	22 1/2	32	40 1/2	55 1/2	74 1/2
Breaking Strain, lbs.....	3,600	6,700	9,800	12,500	14,300	15,700	21,800	40,000
Extra Std. Flat Chain, Weight Ea..	.31	1.	1.8	3.5	5.3	7.8	14.2	37.6
Cable Chain								
Length.....	14 1/2	18	27	33 1/2	42	57	76	
Breaking Strain, lbs.....	6,000	9,000	12,500	14,300	15,700	21,800	40,000	
Extra Cable Chain, Weight Each ..	1.	1.9	4.3	6.2	8.6	14.8	42.6	
Extra Jaws, Weight per Pair.....	.56	1.4	1.6	2.8	3.9	5.1	7.4	19.1
Extra Bolt and Nut, Weight per Set..	.13	.25	.38	.5	.63	.88	1.2	2.8

♦ REGISTERED TRADE MARK

**WILLIAMS' IMPROVED ♦“VULCAN”
DROP-FORGED CHAIN PIPE TONGS**

For Turning, or Holding 1/8 to 12 in. Pipe



Improved “Vulcan” Tongs are similar in design to the original “Vulcan” except that Jaws are double-ended, and are reversible. When teeth first in use wear, Jaws may be quickly reversed, end-for-end, thus providing double service life.

Jaws are fastened to the handle with two unusually tough steel studs. The Tongs are wholly made of wrought steel and are fully guaranteed.

Chains swing from the center and can be used on either side of the jaws, thus reducing to the minimum, wear upon specific teeth.

Proof-testing. To insure proper service, each Flat Link Chain is “*proof-tested*” in a standard tension machine *to two-thirds of its breaking strain* listed in table. Each Chain, so tested, is stamped **O** on the drop-forged swinging link and to it is attached a leaden seal bearing our trademark **W** thus absolutely establishing the safety-factor and reliability of every tong.

Standard finish—jaws have bright face around orange panel.

Number	30	31	32	33	33 1/2	34	35
Capacity							
Size Pipe, inches.....	{ 1/8 to 3/4	{ 1/8 to 1 1/2	{ 1/4 to 2 1/2	{ 3/4 to 4	{ 1 to 6	{ 1 1/2 to 8	{ 2 to 12
Extreme Length.....	13 3/4	20	27	37	44 1/2	50 1/2	64 1/2
Weight, lbs.....	2	5 3/4	10	17	24	31	52
Flat “Standard” Chain							
Length.....	9 1/2	13 1/2	17 1/2	22 1/2	32	40 1/2	55 1/2
Breaking Strain, lbs.....	3,600	6,700	9,800	12,500	14,300	15,700	21,800
Extra Std. Flat Chain, Wt., Ea.	.31	1	1.8	3.5	5.3	7.8	14.2
Extra Jaws, Wgt., per Pair..	.69	1.6	2.3	3.9	4.8	6.3	10.6
Ex. Nuts and Studs, Wt., Set	.06	.13	.25	.31	.38	.5	.63

♦ REGISTERED TRADE MARK

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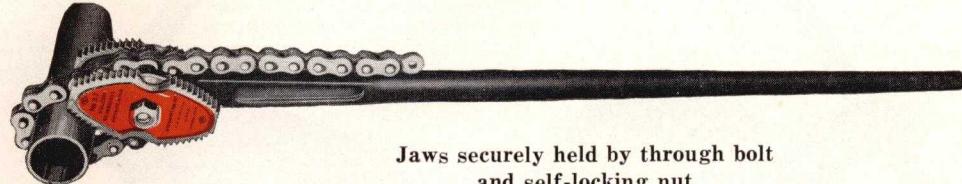
DROP-FORGINGS AND

WILLIAMS

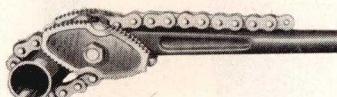
DROP-FORGED TOOLS

WILLIAMS' "VULCAN" REVERSIBLE DROP-FORGED CHAIN PIPE TONGS

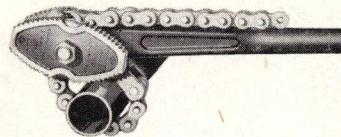
For Both Pipe and Fittings 1/4 to 8 in.



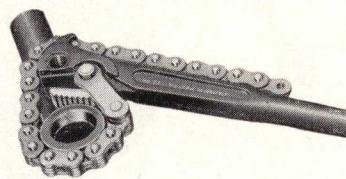
Jaws securely held by through bolt
and self-locking nut



For "Breaking Out"



For "Making up"



For Fittings

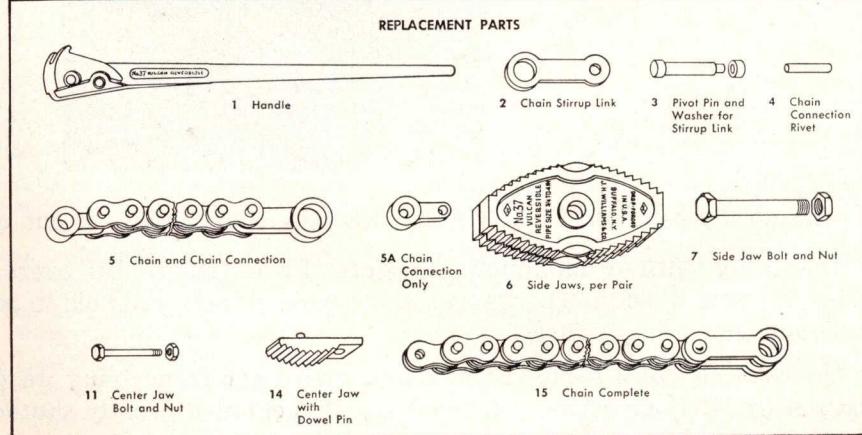
Without removing the tongs or loosening the chain "Vulcan" Reversible Tongs will turn pipe instantly in either direction. Since removal of the tongs is unnecessary no time is lost in reversing the action.

Outer jaws can be removed to make an efficient fittings tongs for narrow beads and flanges. Jaw removal is accomplished by taking out the single bolt and nut used in assembly. These outer jaws are reversible end for end. Standard finish—jaws have bright face around orange panel.

Chains are standard Flat Link.

Proof-Testing. To insure proper service, each Flat Link Chain is "proof-tested" in a standard tension machine to *two-thirds of its breaking strain* listed in table. Each chain so tested is stamped **•** on the drop-forged swing link and to it is attached a leaden seal bearing our trade-mark **W** thus absolutely establishing the safety-factor and reliability of every tong.

Wholly made from tough wrought steel; all parts are interchangeable.



Order replacements by part number and tong size.

No. 5 Chain Replacement includes No. 5A Chain Connection on one end and connection (not illustrated separately) on other end for "Vulcan" and other makes of single jaw pipe tongs. No. 15 Chain Replacement, with connections as illustrated, fits "Vulcan" Reversible and other make tongs of this type only.

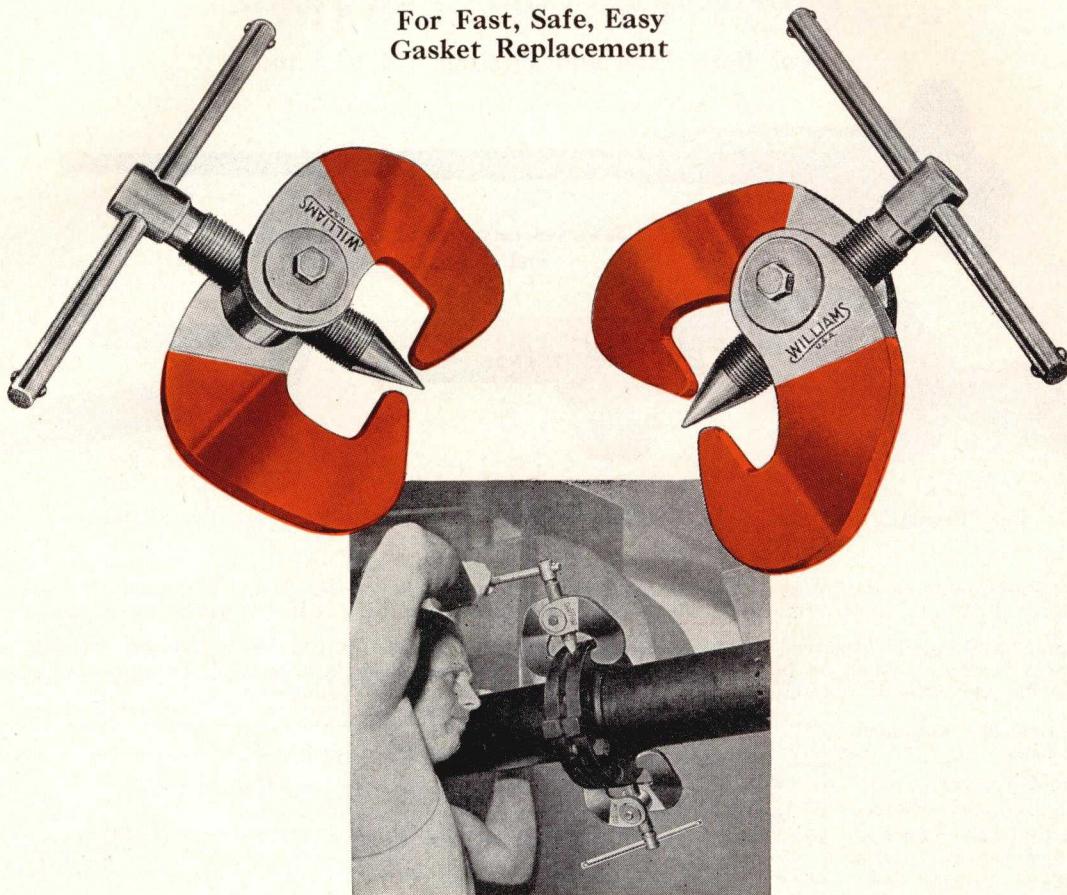
Number	27	37	47	57
For Pipe and Fittings, inches.....	1/4 to 2-1/2	3/4 to 4	1 to 6	1-1/2 to 8
Extreme Length.....	27	37	44-1/2	50-1/2
Weight, Lbs.....	12.3	19.7	29.3	43
Standard Flat Link Chain				
Length.....	17-1/2	22-1/2	32	40-1/2
Breaking Strain, Lbs.....	9,800	12,500	14,300	15,700

♦ REGISTERED TRADE MARK

WILLIAMS' FLANGE-JACKS

PATENTED

For Fast, Safe, Easy
Gasket Replacement



These fully-patented FLANGE-JACKS take the guesswork out of gasket replacement.

Operating with a minimum of effort, FLANGE-JACKS exert tremendous pressure smoothly and evenly. The flanges are parted quickly and held in perfect alignment without damage to flange faces.

There is no shock along the pipe line, no danger from flying wedges and no sparks are caused by hammer blows. FLANGE-JACKS eliminate costly shutdowns, making possible fast, economical repairs in hard-to-get-at locations.

Technical data sheet covering Flange-Jacks capacities for all standard flange faces in various pipe classes and the dimensional limitations of special flanges available on request.

Table below indicates Flange-Jacks capacities for standard raised face flanges in widely used cast iron and steel pipe classes.

Sold in Pairs Only

No.	Capacity — Standard Raised Face Flanges				Weight Per Pair	No.
	125 lb. Cast Iron	150 lb. Steel	250 lb. Cast Iron	300 lb. Steel		
20	2" to 20"	2" to 20"	1" to 12"	3/4" to 12"	13	20
30	16" to 48"	18" to 24"	12" to 30"	12" to 24"	45	30

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DROP-FORGINGS AND WILLIAMS DROP-FORGED TOOLS

WILLIAMS' LATHE TOOL SETS

"THE HOLDERS THAT HOLD"

Convenient—Efficient—Economical

The Six "always ready" Sets illustrated below, provide for complete Lathe service—Turning, Boring, Knurling, Threading, Cutting-Off and Side work—in a minimum number of tools, unequalled elsewhere—High Speed Cutters and Wrenches are provided throughout. Strong steel case has convenient compartments for Holders, Cutters and Wrenches.



Williams' Knurling-Tools Nos. 00-K to 2-K have self-centering heads, with ONE pair of Knurls for fine, medium, or coarse work. Unless otherwise specified, "Diamond" Pattern, Medium Knurls will be supplied.

ONE Williams' Holder takes BOTH cutting-off and side blades. A tool that performs both classes of work by the mere substitution of suitable cutters, tells its own story of economy. Both Cutting-off and Side Blades are furnished.

Each Williams' Boring-Tool takes SIX or more sizes of Bars WITHOUT using bushings. ONE tool holds MANY Bars. Two styles of Bars—"Sleeve" as illustrated and "Plain" at lower price.

Williams' Turning-Tools have Large Alloy Steel Screw—heat-treated, unbreakable. Their accurately broached hole provides rigid seat for cutter—no chatter, no breakage.

Williams' Threading-Tools Nos. 00-T to 52 with Formed Cutter assure threads that fit perfectly. In resharpening the Cutter, grind its top edge only. The point will always retain the proper form and angle.

Williams' Sleeve Boring-Bar fastening provides for the rapid adjustment of either straight or angular cutters without use of extra parts. It is stronger than others of same general design.

Be careful to measure the opening in tool-post before ordering Sets. Due to a considerable variation in the proportions of lathes as furnished by different manufacturers, it is impossible to state definitely the "swing" of lathe best adapted to a given size Tool Holder.

Set No.	For Lathes of Approx. Swing Inches	Size of Holder Shank	WILLIAMS' TOOL HOLDERS IN SETS										Quantity of Tools in Set	Weight Each, Lbs		
			Turning Tools				Cutting-off and Side Tools				Thread-ing Tool No.	Boring Tool No.	Knurling Tool No.			
			Straight Shank No.	Offset Shank		Straight Shank No.	Offset Shank		R. H. No.	L. H. No.						
00A	7 to 10	5/16 x 3/4	00-S	00-R	00-L	19	29-R	29-L	00-T	00-B	00-K	9	5.6			
0A	10 to 12	3/8 x 7/8	0-S	0-R	0-L	20	30-R	30-L	50	8	0-K	9	8.6			
1A	14 to 16	1/2 x 1-1/8	1-S	1-R	1-L	21	31-R	31-L	51	9	1-K	9	16			
2A	16 to 18	5/8 x 1-3/8	2-S	2-R	2-L	22	32-R	32-L	52	10	2-K	9	25			
*3	18 to 20	3/4 x 1-5/8	3-S	3-R	3-L	23	33-R	33-L	....	11	....	7	34.5	
*4	24 to 36	7/8 x 1-3/4	4-S	4-R	4-L	24	34-R	34-L	....	....	....	6	32

* Metal case is not supplied with Sets 3 and 4.

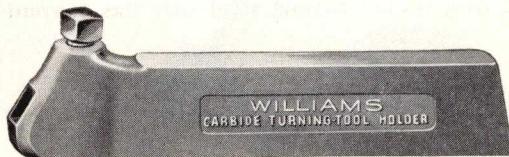
DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

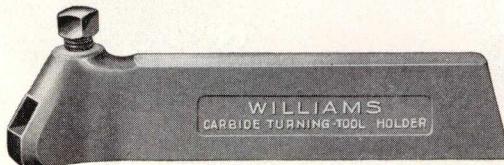
WILLIAMS' CARBIDE TURNING-TOOL HOLDERS

With Straight and Offset Shanks

"THE HOLDERS THAT HOLD"



Straight
Shank



Right Hand
Offset
Shank

Furnished with Wrench,
but *without* Cutter

Left Hand
Offset
Shank



In these Tools, the Cutter is held parallel to the shank. Consequently, Cutters can be so ground as to provide maximum support for the cutting edge. This feature, plus the extremely rigid Holder, is the recognized basis for the best performance of cemented Carbide Cutters.

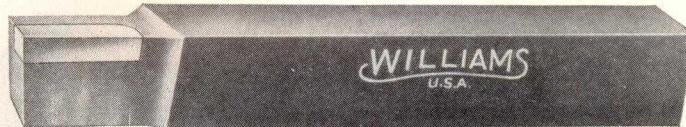
Holders are broached for square Carbide Cutters, but are supplied WITHOUT CUTTERS.

Williams' Carbide Tipped Cutters, for use with the above holders, are available in two grades and four standard shapes of tips. See opposite page for full description.

Straight Shank	Number		Holder, Size	Cutter Size, Square	For Lathes of Approx. Swing, Inches	Weight Each, Lbs.				
	Offset Shank									
	Right Hand	Left Hand								
T-0-S	T-0-R	T-0-L	3/8 x 15/16 x 6	1/4	9 to 10	.71				
T-1-S	T-1-R	T-1-L	1/2 x 1 1/4 x 7	5/16	11 to 14	1.5				
T-2-S	T-2-R	T-2-L	5/8 x 1 1/2 x 8	3/8	14 to 16	2.4				
T-3-S	T-3-R	T-3-L	3/4 x 1 3/4 x 9	7/16	16	3.7				
T-4-S	T-4-R	T-4-L	7/8 x 1 7/8 x 10	1/2	18	5.				
T-5-S	T-5-R	T-5-L	1 x 2 1/8 x 12	5/8	20 to 24	8.2				

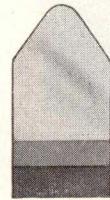
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WILLIAMS' CARBIDE TIPPED TURNING CUTTER BITS
With Square Shanks

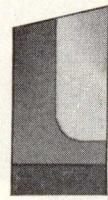


Grade 883
Gray Lacquered

Grade 78B
Orange Lacquered



80° Round Nose



Left Hand



Right Hand



Square Nose

Williams' CARBIDE TIPPED Turning Cutter Bits are available in four standard cutter shapes and two grades to fit square shank holders. Grade 883 with shanks lacquered Gray are designed for machining cast iron, brass, bronze, aluminum and non-metallics. Grade 78B with shanks lacquered Orange are designed for machining steel. These grades will be found satisfactory for general shop use; Gray for all non-ferrous metals, etc. and Orange for all steels.

These firmly cemented carbide tips are finely ground ready for use and are individually covered with a protective ethyl cellulose sheath. This sheath is easily removed and can be replaced when cutters are not in use.

Please specify Grade desired when ordering: Gray for Cast Iron, etc., Orange for Steel.

SQUARE SHANK TURNING CUTTERS					
No.	No.	Shank Size	Tip Size	Wgt., Ea.	Std. Pkg.
Right Hand	Left Hand				
M-41	M-71	1/4 x 1/4 x 1-1/2	3/32 x 3/16 x 5/16	.03	6
M-42	M-72	5/16 x 5/16 x 2-1/4	3/32 x 1/4 x 1/2	.06	6
M-43	M-73	3/8 x 3/8 x 2-1/2	3/32 x 1/4 x 1/2	.07	6
M-44	M-74	7/16 x 7/16 x 3	3/32 x 1/4 x 1/2	.16	4
M-45	M-75	1/2 x 1/2 x 3-1/2	1/8 x 5/16 x 5/8	.25	4
M-47	M-77	5/8 x 5/8 x 4	5/32 x 3/8 x 3/4	.44	4
Square Nose	80° Rd. Nose	Shank Size	Tip Size	Wgt., Ea.	Std. Pkg.
M-11	M-121	1/4 x 1/4 x 1-1/2	1/16 x 1/4 x 5/16	.03	6
M-12	M-122	5/16 x 5/16 x 2-1/4	3/32 x 5/16 x 3/8	.06	6
M-13	M-123	3/8 x 3/8 x 2-1/2	3/32 x 3/8 x 3/8	.07	6
M-14	M-124	7/16 x 7/16 x 3	3/32 x 7/16 x 1/2	.16	4
M-15	M-125	1/2 x 1/2 x 3-1/2	1/8 x 1/2 x 1/2	.25	4
M-17	M-127	5/8 x 5/8 x 4	5/32 x 5/8 x 5/8	.44	4

WILLIAMS' CARBIDE TURNING-TOOL HOLDER SETS

**IN THE METAL CASE WITH THE CONVENIENT
SLIDING AND REMOVABLE CUTTER BIT TRAY**



All sets contain three Carbide Turning-Tool Holders, eight Carbide Tipped Cutter Bits, and one wrench.

The five Williams' Carbide Turning-Tool Holder Sets each contain one Straight Shank, one Right-Hand Offset and one Left-Hand Offset Carbide Turning-Tool Holder; eight Carbide Tipped Turning Cutter Bits—four Grade 883 with shanks lacquered gray for non-ferrous metals and four Grade 78B with shanks lacquered orange for steel. Both grades are furnished with one each Right Hand, Left Hand, Square Nose and 80° Round Nose Cutters.

Each set is furnished in a strong steel case complete with wrench. The cutters are packed in a removable tray for easy selection as illustrated.

WILLIAMS' CARBIDE TOOL HOLDERS IN SETS

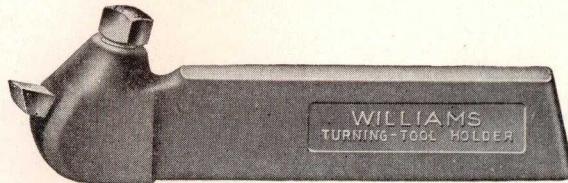
Set No.	For Lathes of Approx. *Swing Inches	Carbide Turning Tools			Size of Holder Shank	Cutter Size Square Inches	Weight Each, Lbs.	Carbide Tipped Turning Cutter Bits										
		Offset Shank		Right Hand No.				Grade 883 Gray Shanks				Grade 78B Orange Shanks						
		Strgt. Shank No.	Right Hand No.					Right Hand No.	Left Hand No.	Square Nose No.	80° Rd. Nose No.	Right Hand No.	Left Hand No.	Square Nose No.	80° Rd. Nose No.			
M-0A	10 to 12	T-0-S	T-0-R	T-0-L	3/8x15/16	1/4	3.1	M-41	M-71	M-11	M-121	M-41	M-71	M-11	M-121			
M-1A	14 to 16	T-1-S	T-1-R	T-1-L	1/2x1-1/4	5/16	5.8	M-42	M-72	M-12	M-122	M-42	M-72	M-12	M-122			
M-2A	16 to 18	T-2-S	T-2-R	T-2-L	5/8x1-1/2	3/8	9.2	M-43	M-73	M-13	M-123	M-43	M-73	M-13	M-123			
M-3A	18 to 20	T-3-S	T-3-R	T-3-L	3/4x1-3/4	7/16	13.3	M-44	M-74	M-14	M-124	M-44	M-74	M-14	M-124			
M-4A	24 to 36	T-4-S	T-4-R	T-4-L	7/8x1-7/8	1/2	18.9	M-45	M-75	M-15	M-125	M-45	M-75	M-15	M-125			

* Be careful to measure the opening in tool-post before ordering Sets. Due to a considerable variation in the proportion of lathes as furnished by different manufacturers, it is impossible to state definitely the "swing" of lathe best adapted to a given size Tool Holder.

WILLIAMS' TURNING-TOOL HOLDERS

With Straight and Offset Shanks

"THE HOLDERS THAT HOLD"



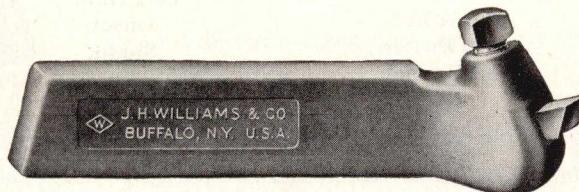
Straight
Shank



Right Hand
Offset
Shank

Furnished With Cutter
and Wrench

Left Hand
Offset
Shank



Holders have nose chamfered and are specially heat-treated and hardened.

The cutter-holding channel is unusually accurate and long. It provides an absolutely true and rigid seat for the cutter and assures a chatter-proof tool. No breaking of high speed steel bits.

The Set Screws, made of a fine grade of Alloy Steel, are accurately machined and carefully heat-treated and hardened. They are unusually tough and strong and provide the maximum efficiency in cutter fastening.

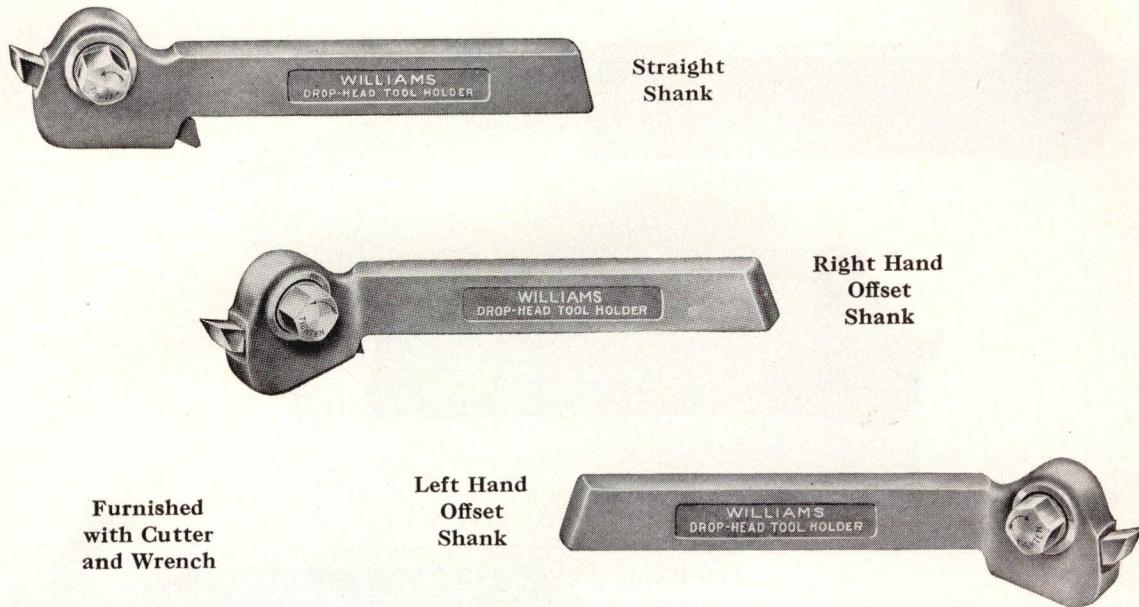
High Speed Cutters are furnished in a "diamond-point" form that requires a minimum of grinding.

Number			Holder, Size	Cutter Size, Square	For Lathes of Approx. Swing Inches	Weight Each, Lbs.				
Straight Shank	Offset Shank									
	Right Hand	Left Hand								
000-S	000-R	000-L	5/16 x 1/2 x 4	3/16	6 to 7	.31				
00-S	00-R	00-L	5/16 x 3/4 x 4 1/2	3/16	7 to 10	.44				
0-S	0-R	0-L	3/8 x 7/8 x 5	1/4	10 to 12	.67				
1-S	1-R	1-L	1/2 x 1 1/8 x 6	5/16	14 to 16	1.3				
2-S	2-R	2-L	5/8 x 1 3/8 x 7	3/8	16 to 18	2.1				
3-S	3-R	3-L	3/4 x 1 5/8 x 8	7/16	18 to 20	3.3				
4-S	4-R	4-L	7/8 x 1 3/4 x 9	1/2	24 to 36	4.8				
5-S	5-R	5-L	1 x 2 x 11	5/8	.....	7.7			
6-S	6-R	6-L	1 1/4 x 2 1/4 x 13	3/4	.....	12.2			

WILLIAMS' DROP-HEAD TURNING-TOOL HOLDERS

With Straight and Offset Shanks

"THE HOLDERS THAT HOLD"



Designed for use on lathes with clamp-tool rests and low centers, and excellently adapted to shaper and planer work.

The cutter-holding channel is unusually accurate. It provides an absolutely true and rigid seat for the cutter and assures a chatter-proof tool. No breaking of high speed steel bits.

The Cam-fastening is always rapid and positive — the greater the pressure the tighter the lock. It offers full freedom for operation without removal of Holder from tool post, and imposes no obstruction to cutting facilities.

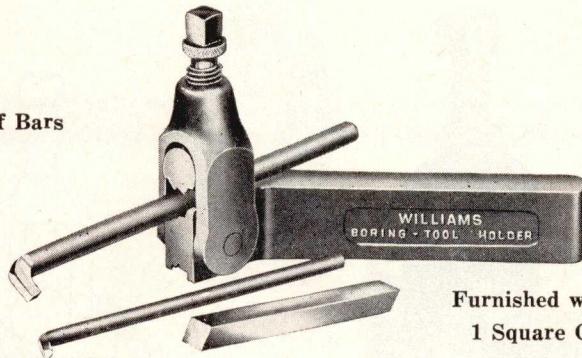
The "diamond-point" form in which the High Speed Cutters are furnished requires the minimum of grinding.

Straight Shank		Offset Shank				Holder, Size	Cutter Size, Square	Height from Bottom of Shank to Cutter Point	Weight Each, Lbs.
New No.	Old No.	Right Hand		Left Hand					
100-S	0200-S	100-R	0200-R	100-L	0200-L	7/16 x 9/16 x 6	3/16	9/16	.56
101-S	200-S	101-R	200-R	101-L	200-L	9/16 x 11/16 x 6 7/8	1/4	11/16	1
201-S	201-S	201-R	201-R	201-L	201-L	3/4 x 7/8 x 7 7/8	5/16	13/16	1.8
102-S	202-S	102-R	202-R	102-L	202-L	7/8 x 1 x 8 7/8	3/8	15/16	2.8
103-S	204-S	103-R	204-R	103-L	204-L	1 1/8 x 1 1/4 x 11	1/2	1 3/16	5.4

WILLIAMS' LIGHT BORING-TOOL HOLDERS

FOR SMALL, LIGHT BORING, TURNING, ETC.

For Many Sizes of Bars



Furnished with 2 Finished Bars,
1 Square Cutter and Wrench

This Holder is very handy and economical for tool room use and for all small work—not only in boring small diameters, threading, etc., but also in turning.

Boring. Each tool will hold a number of sizes of Bars; two, varying 1/8" in diameter, are supplied with each Holder. The solid Bars are High Speed Steel, carefully hardened and ground, ready for use.

Turning. The Holder, with offset shank, is reversible for right and left hand work. The self-adjusting gib allows the yoke to clear the end of the Holder. A hardened, High Speed Steel square Cutter with ends beveled to a "diamond point" for easy grinding to desired form, is supplied with each tool.

No.	Holder Size Shank	With Each Holder		For Lathes of Approx. Swing Inches	Weight Each, Lbs.	No.
		2 Bars High Speed Steel, Diameter	1 High Speed Square Cutter			
15	3/8 x 3/4 x 5	1/8 & 1/4	1/4	9 to 10	.88	15
16	1/2 x 1 x 5 3/4	3/16 & 5/16	5/16	11 to 14	1.6	16
17	5/8 x 1 1/4 x 6 3/4	1/4 & 3/8	3/8	14 to 16	2.8	17
18	3/4 x 1 1/2 x 7 1/2	5/16 & 7/16	7/16	16	4.6	18

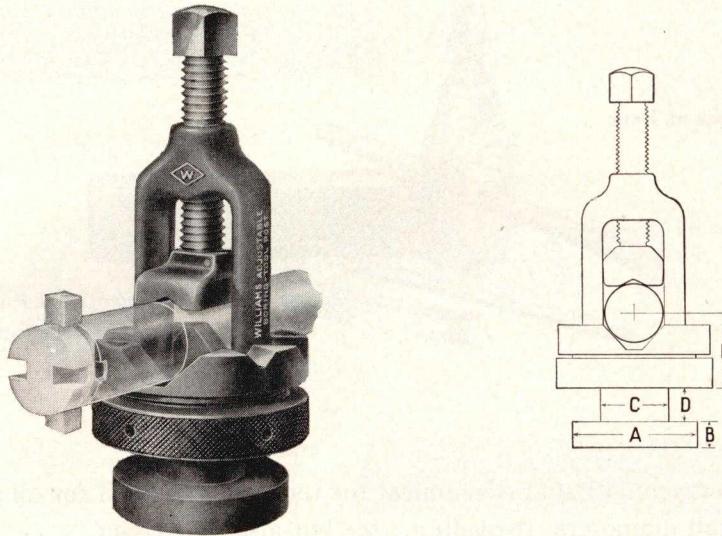
EXTRA BORING BARS

Size.....	1/8 x 4	3/16 x 4-1/2	1/4 x 5	5/16 x 6	3/8 x 7	7/16 x 8
For Holders.....	15 & 16	15 to 17	15 to 17	15 to 18	16 to 18	17 & 18

WILLIAMS' ADJUSTABLE BORING-TOOL POSTS

FOR MANY SIZES OF BARS

Furnished with either Sleeve or Plain Bar, 1 each 45° and
90° Cutter and 2 Wrenches



Each Post accommodates a wide range of Bars; commercial sizes of bar steel are adaptable for either Bars or Cutters without machining.

The height of the Bar is easily and quickly adjusted — a turn of the Knurled Ring will raise or lower the base on which the Bar rests; tightening the Set Screw in the head of the Post then locks the whole device instantly, giving an extremely rigid tool.

If Post is desired *without* the Bar, deduct price for standard size Bar.

Standard size Sleeve Bar will be furnished, unless otherwise specified.

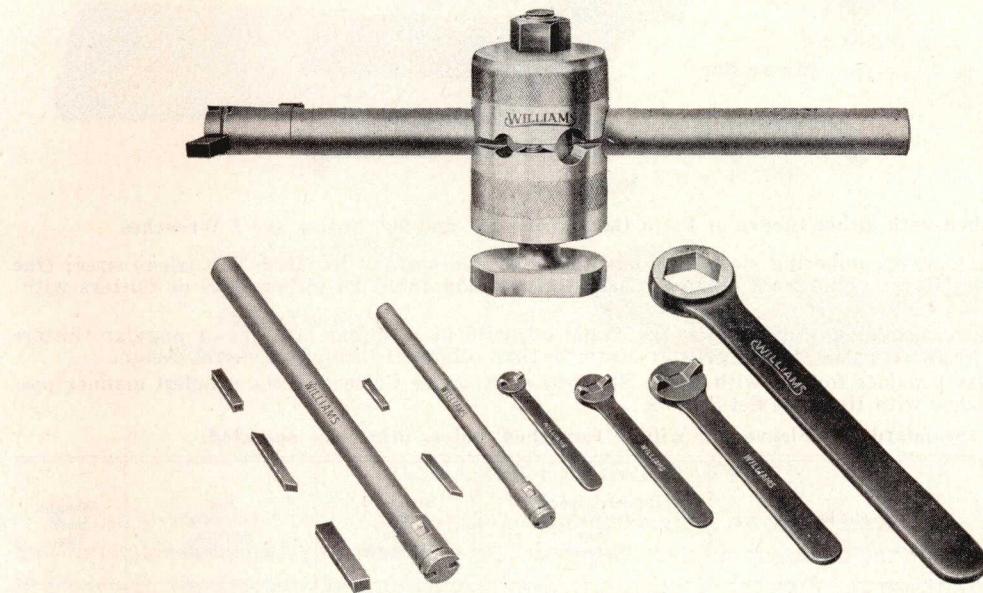
Number	2	3	4	5
Post—Length over all, without Screw.....	6 5/8	7 5/8	9 1/8	11 1/8
† "T" Slot Flange:				
A Diameter.....	3	3 1/2	4 1/4	5
B Thickness.....	5/8	3/4	7/8	1 1/16
† "T" Slot Neck:				
C Diameter.....	1 5/8	1 3/4	2	2 1/4
D Length.....	3/4	13/16	1	1 1/4
E Center Height.....	1 13/16	1 7/8	2 3/8	2 3/4
Post Capacity for Bars—Size.....	1/2 to 1 5/16	1/2 to 1 1/2	5/8 to 1 13/16	3/4 to 2 1/4
Standard Bar—Size.....	1 5/16	1 1/2	1 13/16	2 1/4
Weight Each, Lbs.				
With Sleeve Bar, High Speed Cutters.....	15.	24.1	39.5	69.1

† The "T" Slot Flange and Neck are furnished large to allow for fitting to individual machines. For special finishing to specified dimensions, an extra net charge for each Post will be made.

Bar and Cutter details on page 172

WILLIAMS' 3 - BAR BORING TOOLS

"THE HOLDERS THAT HOLD"



Each Holder accommodates three sizes of Bars. Speedy changes can be made by a slight turn of the nut which releases or secures both Bar and Holder instantly. Speeds and feeds can be increased since this Holder allows the operator to use the strongest bar possible for each individual job.

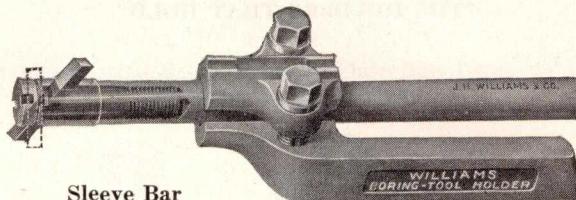
Williams' 3-Bar Boring Tools are packed complete in a separate box, each set including Holder; three Sleeve Bars each with one 45° and one 90° high speed cutter and wrench; and one wrench for Holder nut.

No.	For Lathes Swing Inches	Diameter Bars	Length of Bars	Size Cutters, Square	Weight Each, Lbs.	No.
0-BB	8 to 10	3/8 , 1/2 , 3/4	7 , 7-5/8, 11	* , 3/16, 1/4	5.2	0-BB
1-B	12 to 16	1/2 , 3/4 , 1- 1/8	7-5/8, 11 , 16	3/16, 1/4 , 3/8	18.	1-B
2-B	16 to 18	5/8 , 15/16, 1- 5/16	9-1/8, 13-1/4, 19	3/16, 5/16, 3/8	25.9	2-B
3-B	20 to 22	3/4 , 1-1/8 , 1- 1/2	11 , 16 , 23-1/4	1/4 , 3/8 , 7/16	42.4	3-B
4-B	24 to 32	15/16, 1-5/16, 1-13/16	13-1/4, 19 , 27-1/4	5/16, 3/8 , 1/2	68.	4-B

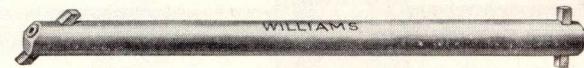
* 3/8 x 7" Solid Bar as listed under "Extra Boring Bars" on page 169.

The "T" Slot Bolt Head and Bottom Part of Holder are furnished large to allow for fitting to individual machines. For special finishing to specified dimensions an extra net charge for each Holder will be made.

WILLIAMS' BORING-TOOL HOLDERS
EACH TAKES MANY SIZES OF BARS



Sleeve Bar



Plain Bar

Furnished with either Sleeve or Plain Bar, 1 each 45° and 90° Cutter and 2 Wrenches

With this Holder, encumbering sleeves or bushings are unnecessary for Bars of various sizes; One Holder takes many Bars. Commercial forms of bar steel are adaptable for either Bars or Cutters without machining.

The Sleeve-bar fastening provides for the rapid adjustment of either straight or angular Cutters without the use of extra parts; it has greater strength than others of the same general design.

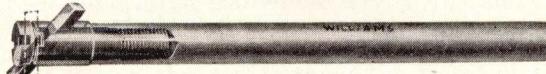
The Plain Bar provides for use with either Straight or Angular Cutters in the simplest manner possible and is furnished with Headless Set Screws.

Standard size Sleeve Bar will be furnished, unless otherwise specified.

New No.	Old No.	Holder, Size	Holder Capacity for Bars, Size Diameter	Standard Bar, Size Diameter	For Lathes of Approx. Swing Inches	Weight Each, Lbs.
00B	080	5/16 x 3/4	3/16 to 1/2	1/2	6 to 8	1.2
8	80	3/8 x 7/8	1/4 to 5/8	5/8	9 to 10	2.
9	81	1/2 x 1 1/8	1/4 to 3/4	3/4	11 to 14	3.8
10	82	5/8 x 1 3/8	3/8 to 15/16	15/16	14 to 16	6.6
11	83	3/4 x 1 5/8	1/2 to 1 1/8	1 1/8	16	11.
12	.....	7/8 x 1 3/4	1 5/16	1 5/16	18	16.

BORING-BARS AND CUTTERS

FOR BORING-TOOL HOLDERS AND ADJUSTABLE BORING-TOOL POSTS



Sleeve Bar



Plain Bar

Furnished with Two Cutters and Wrench

Boring-Bars Approximate Size and Number					For Use With Holders No.	Cutters	
Sleeve			Plain			Size Square and Length	For Use at Angles of
No.	Size	Wgt. Each	No.	Size	Wgt. Each		
0B	1/2 x 7 5/8	.45	0-BX	1/2 x 8 1/8	.44	00B-11	{ 3/16 x 1 90° { 3/16 x 1 1/2 45°
08	5/8 x 9 1/8	.91	08-X	5/8 x 10 1/8	.88	8-11	{ 3/16 x 1 90° { 3/16 x 1 1/2 45°
09	3/4 x 11	1.5	09-X	3/4 x 12 1/8	1.5	9-11	{ 1/4 x 1 1/4 90° { 1/4 x 2 45°
010	15/16 x 13 1/4	2.9	010-X	15/16 x 14 1/8	2.8	10-11	{ 5/16 x 1 1/2 90° { 5/16 x 2 1/2 45°
011	1 1/8 x 16	4.9	011-X	1 1/8 x 16 3/4	4.8	11	{ 3/8 x 1 7/8 90° { 3/8 x 3 45°
012	1 5/16 x 19	7.6	012-X	1 5/16 x 20	7.5	12	{ 3/8 x 2 1/8 90° { 3/8 x 3 1/4 45°
013	1 1/2 x 23 1/4	12.1	013-X	1 1/2 x 23 1/2	12.		{ 7/16 x 2 1/4 90° { 7/16 x 3 3/8 45°
014	1 13/16 x 27 1/4	20.4	014-X	1 13/16 x 28	20.6		{ 1/2 x 2 5/8 90° { 1/2 x 4 45°
015	2 1/4 x 33	38.8	015-X	2 1/4 x 34	38.8		{ 5/8 x 3 1/8 90° { 5/8 x 4 3/4 45°

Light Boring Bars and Holders on page 169.

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WILLIAMS' THREADING-TOOL HOLDERS

"THE HOLDERS THAT HOLD"



LOCKABLE-SPRING HEAD PATTERN

Furnished with
Finished Cutter and Wrench

FORMED-CUTTER PATTERN
Furnished with
Finished Cutter and Wrench



LOCKABLE-SPRING PATTERN

A highly perfected tool for fine and coarse threading, or other Lathe work. The Nut for the Lockable-Spring Head provides for the rigid backing required for heavy cuts; when it is loosened, the Holder becomes a spring-tool for finishing work. It is equally efficient as a Turning-tool. The Cam-fastening is always rapid and positive—the greater the pressure, the tighter the lock.

The cutter, made from High Speed steel, is finished. Each end is ground, the "V" point forming either an angle of 60° for U. S., or 55° for Whitworth Std. threads.

FORMED-CUTTER PATTERN

Williams' Threading-Tools with FORMED CUTTER assure threads that fit perfectly, since in re-sharpening the Cutter, it is necessary to grind its top edge only. Therefore, the point will always retain proper form and angle as originally supplied.

The High Speed Cutter is ground to an included angle of 60° and is backed off for proper clearance. Its rear, flat edge is eccentrically formed; the hardened stop screw, bearing against it, provides positive and accurate adjustment.

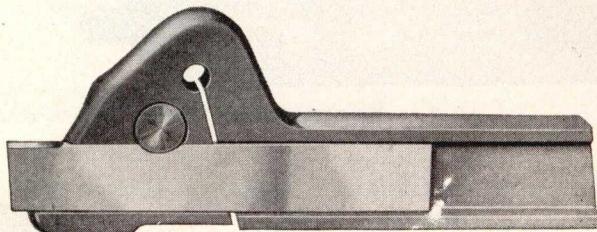
New No.	Old No.	Holder, Size	Cutter, Size Square	For Lathes of Approx. Swing Inches	Weight Each, Lbs.
LOCKABLE-SPRING PATTERN					
S-50	.....	3/8 x 7/8 x 5 1/4	1/4	10 to 12	.75
S-51	.....	1/2 x 1 1/8 x 6	5/16	14 to 16	1.5
S-52	.....	5/8 x 1 3/8 x 7	3/8	16 to 18	2.5
FORMED-CUTTER PATTERN					
00-T	C-050	5/16 x 3/4 x 5	Formed	7 to 10	.61
50	C-50	3/8 x 7/8 x 5	Formed	10 to 12	.8
51	C-51	1/2 x 1 1/8 x 5 3/4	Formed	14 to 16	1.3
52	C-52	5/8 x 1 3/8 x 7	Formed	16 to 18	2.3
53	.....	3/4 x 1 5/8 x 8	Formed	18 to 20	3.3

WILLIAMS' SPRING CUTTING-OFF TOOL HOLDERS

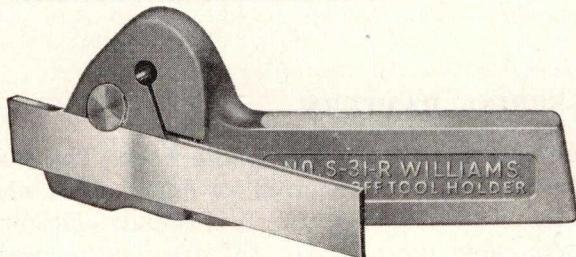
With Straight and Right Hand Offset Shanks

"THE HOLDERS THAT HOLD"

**Straight
Shank**



**Right Hand
Offset Shank**



Furnished with Finished Cutter and Wrench

These Spring Tools make comparatively simple all lathe cutting-off work—long thought the hardest of lathe operations. Due to the "goose-neck" form of the Holder, the Cutter Blade is relieved of excess pressure; no chattering, no "climbing" of the work on the tool—the real cause of nearly all breakage of cutting-off tools. These Holders are also particularly efficient with automatic feed.

The cam-fastening is always rapid and positive—the greater the pressure the tighter the lock. It offers full freedom for operation without removal of Holder from tool post.

Cutter Blades are High Speed Steel, hardened and ground on both ends ready for use. By reversing the blade end for end it can be used in either Left or Right Hand Offset Shanks. They are interchangeable in Holders of corresponding size on Page 175.

These Cut-off Blades are interchangeable in other standard Holders.

Straight Shank Holders will be furnished, unless otherwise specified.

Number				Holder, Size	Cutter Blades, High Speed Steel, Finished Size	For Lathes of Approx. Swing Inches	Weight Each, Lbs.				
Straight Shank		Offset Shank Right Hand									
New No.	Old No.	New No.	Old No.								
S-20	NS-20	S-30-RA	NS-30-RA	3/8 x 13/16	3/32 x 5/8	9 to 10	.84				
S-21	NS-21	S-30-R	NS-30-R	3/8 x 31/32	3/32 x 5/8	9 to 10	.85				
S-22	NS-22	S-31-R	NS-31-R	1/2 x 1 3/16	1/8 x 3/4	11 to 14	1.6				
S-23	NS-23	S-32-R	NS-32-R	5/8 x 1 3/8	1/8 x 7/8	14 to 16	2.6				
		S-33-R	NS-33-R	3/4 x 1 5/8	3/16 x 1	16	4.1				

WILLIAMS' CUTTING-OFF AND SIDE-TOOL HOLDERS

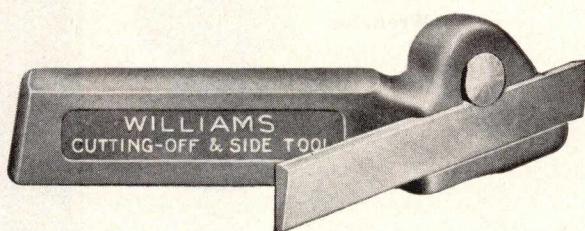
For Interchangeable Blades. Straight and Offset Shanks.

"THE HOLDERS THAT HOLD"

Right Hand
Straight
Shank



Left Hand
Offset
Shank



Right Hand
Offset
Shank



Furnished with
Finished Cutter and Wrench

One Holder takes **both** Cutting-off and Side Blades, providing unique convenience and economy.

The Cam-fastening is always rapid and positive — the greater the pressure the tighter the lock. It offers full freedom for operation without removal of Holder from tool post.

The Cutter Blades are High Speed Steel hardened and ground on both ends ready for use. By reversing the blade end for end it can be used in either Left or Right Hand Offset Shanks. They are interchangeable in Holders of corresponding size on page 174.

These Cut-off Blades (not Side) are interchangeable in other standard Holders.

Cutting-off Blade will be furnished, unless otherwise specified.

Number			Holder, Size	Cutter Blades High Speed Steel, Finished Size		For Lathes of Approx. Swing Inches	Weight Each, Lbs.			
Straight Shank Right Hand	Offset Shank			Cutting-Off Blade	Side Blade					
	Right Hand	Left Hand								
19	29-R	29-L		5/16 x 13/16	3/32 x 1/2	6 to 8	.47			
20	30-R	30-L		3/8 x 31/32	3/32 x 5/8	9 to 10	.73			
21	31-R	31-L		1/2 x 1-3/16	1/8 x 3/4	11 to 14	1.4			
22	32-R	32-L		5/8 x 1-3/8	1/8 x 7/8	14 to 16	2.2			
23	33-R	33-L		3/4 x 1-5/8	3/16 x 1	16	3.5			
24	34-R	34-L		7/8 x 1-3/4	3/16 x 1-1/8	18	4.7			
25	35-R	35-L		7/8 x 1-3/4	1/4 x 1-1/8	18	5.			

Note: Old Numbers had prefix "N". Numbers 19, 29-R and 29-L were previously known as N-020-R, N-030-R and N-030-L respectively.

DROP-FORGINGS AND

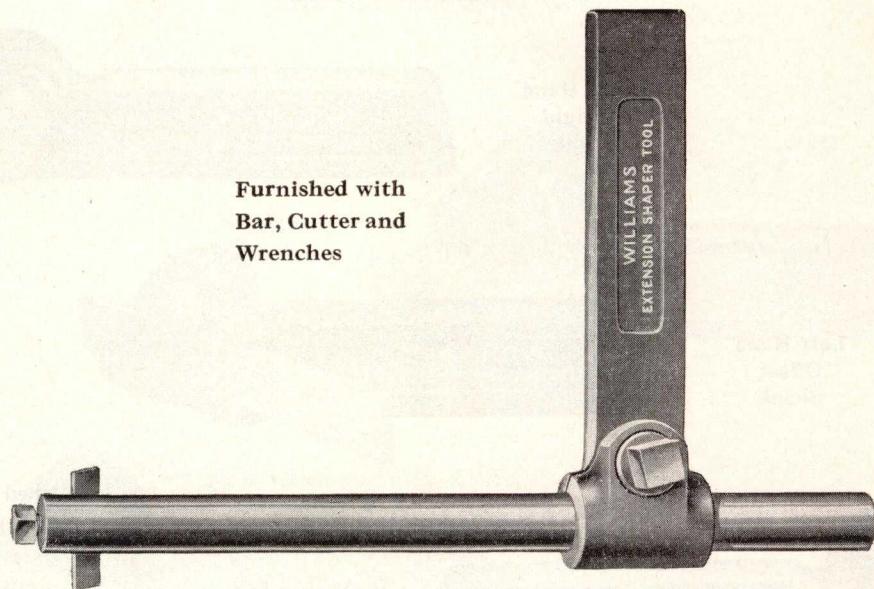
WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' EXTENSION SHAPER TOOLS

"THE HOLDERS THAT HOLD"

Furnished with
Bar, Cutter and
Wrenches



The design and extreme rigidity of this Shaper Tool adapts it for cutting internal keyways, die work or any type of shaper work where extra clearance is needed.

No.	Holder, Size	Size Bar	Size Cutter, Square	Weight Each, Lbs.	No.
*46	3/8 x 7/8	1/2 x 7 1/2	3/16	1.1	*46
47	1/2 x 1 1/8	3/4 x 10	5/16	3.3	47
48	5/8 x 1 3/8	15/16 x 12	3/8	6.	48

* Instead of split collar, as illustrated, bar is held by two hollow set screws.

EXTRA BARS AND BUSHINGS

Each Bar furnished with one Bushing, High Speed Cutter and Wrench.

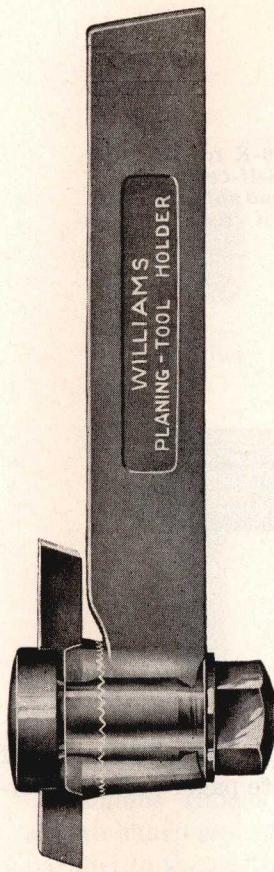
When ordering, please furnish number of Tool or Holder size in which Bar is to be used, otherwise bushing will not be included.

No.	Size Bar	Size Cutter, Square	With Bushing to Fit Holder Number	Without Bushing to Fit Holder No.	Weight Each, Lbs.
0530	1/2 x 7 1/2	3/16	47 and 48	46	.75
0532	5/8 x 8 1/2	1/4	47 and 48	..	1.1
0597	3/4 x 10	5/16	48	47	1.6
0598	15/16 x 12	3/8	.....	48	2.7

1-52

WILLIAMS' PLANING-TOOL HOLDERS

"THE HOLDERS THAT HOLD"

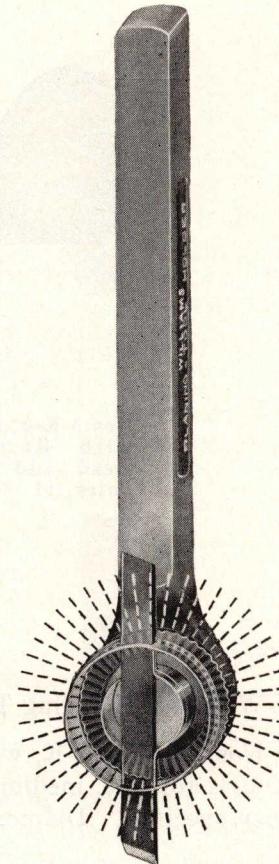


The substantial Bolt-fastening
and serrated Adjustment Ring

This construction
affords most ready
release of Cutter
for easy adjust-
ment.

Furnished with Cutter and Wrench

The serrations in
Holder provide
maximum number
of cutter adjust-
ments.



A rugged, substantial and efficient tool on either Lathe or Planer. Because of its numerous angles of adjustment it also makes an excellent Offset Turning Tool.

The construction assures perfect seat and holding qualities for the Cutters; the convex face of Clamp Nut provides uniform locking pressure for Cutters of either square or rectangular form; the numerous serrations in Holder provide for quick, fine and maximum number of Cutter adjustments unequaled in other designs.

The serrated washer, or Adjustment Ring, which sustains the fastening and working strains, is hardened and tempered. Should it wear in prolonged service, a new Ring *only* is required — not a complete Holder.

New No.	Old No.	Holder, Size	Cutter Size	Complete Holder Weight Each, Lbs.	Extra Adjustment Ring Weight Each, Lbs.
40	91	1/2 x 1 x 7	1/4 x 3/8	2.2	.13
401	92	5/8 x 1 1/4 x 8 1/2	5/16 x 7/16	3.8	.19
41	93	3/4 x 1 1/2 x 10 1/4	3/8 x 1/2	6.	.25
42	94	1 x 1 3/4 x 13 1/4	1/2 x 3/4	11.1	.38
43	95	1 3/8 x 2 x 16 1/2	5/8 x 7/8	20.6	.75
44	96	1 3/4 x 2 3/8 x 19	3/4 x 1	31.	1.3
45	97	2 1/8 x 2 3/4 x 22	7/8 x 1 1/8	53.	1.9

WILLIAMS' KNURLING-TOOL HOLDERS

"THE HOLDERS THAT HOLD"



Nos. 00-K to 2-K
with Self-centering Head and One Pair of Knurls.

Nos. 3-K-0 to 3-K-2
with Revolving Head and Three Pairs of Knurls.



Williams' Knurling Tools are furnished in two designs:—

Nos. 00-K to 2-K, with sturdy, self-centering heads, are each fitted with ONE pair of Knurls for fine, medium, or coarse work — see illustration on opposite page. Unless otherwise specified, "Diamond" Pattern, Medium Knurls will be supplied.

Nos. 3-K-0 to 3-K-2 carry THREE pairs of Knurls for fine, medium and coarse work — see illustration on following page. These are fitted in a revolving head and can be used as desired, without loss of time in changing from one grade of knurling to another.

The Pins are of Tool Steel, carefully tempered.

The Knurls are fully described on next page.

No.	Holder, Size	Knurls, Size			For Lathes of Approx. Swing Inches	Weight Each, Lbs.	No.
		Diam.	Face	Hole			

SELF-CENTERING HEAD — ONE PAIR OF KNURLS

00-K	5/16 x 3/4 x 5	5/8	3/16	7/32	7 to 10	.53	00-K
0-K	3/8 x 7/8 x 5 1/2	5/8	3/16	7/32	10 to 12	.63	0-K
1-K	1/2 x 1 1/8 x 6 5/8	3/4	1/4	1/4	14 to 16	1.3	1-K
2-K	5/8 x 1 3/8 x 7 1/2	3/4	1/4	1/4	16 to 18	1.9	2-K

REVOLVING HEAD — THREE PAIRS OF KNURLS

3-K-0	3/8 x 7/8 x 5 1/2	5/8	3/16	7/32	10 to 12	1.	3-K-0
†3-K-1	1/2 x 1 1/8 x 6 5/8	3/4	1/4	1/4	14 to 16	1.8	†3-K-1
†3-K-2	5/8 x 1 3/8 x 6 5/8	3/4	1/4	1/4	16 to 18	2.2	†3-K-2

† Formerly numbered 11-K and 12-K respectively.

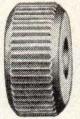
KNURLS FOR WILLIAMS' KNURLING-TOOL HOLDERS

"THE HOLDERS THAT HOLD"

DIAMOND PATTERN

Coarse
14 PitchMedium
21 PitchFine
33 Pitch

STRAIGHT-LINE PATTERN

Coarse
14 PitchMedium
21 PitchFine
33 Pitch

Note: "Pitch" means number of teeth per linear inch.



Illustrations above show actual size of Knurling

Williams' Knurls are made to close limits in all respects and, being accurately cut, they assure sharp and perfect teeth in the knurled product. The hole is concentric with and parallel to the cutting face, insuring uniform, clean cut results. All Knurls are made from high grade tool steel and are specially hardened and tempered.

Furnished in pairs to fit standard makes of Knurling Tools and supplied in two Patterns—"Diamond" and "Straight-Line." Three different pitches in each Pattern—Coarse, 14 pitch; Medium, 21 pitch; Fine, 33 pitch; all as illustrated above. When ordering, always specify Pattern and pitch desired by catalog number.

Knurl No.	For Knurling Tool No.	Pitch	Knurls, Size				Weight Per Pair, Lbs.
			Diameter	Thickness	Face	Hole	
DIAMOND PATTERN							
8227	00-K, 0-K, 3-K-0	Fine	5/8	5/16	3/16	7/32	.05
8224	00-K, 0-K, 3-K-0	Medium	5/8	5/16	3/16	7/32	.05
8221	00-K, 0-K, 3-K-0	Coarse	5/8	5/16	3/16	7/32	.05
8228	1-K, 2-K, 3-K-1, 3-K-2	Fine	3/4	3/8	1/4	1/4	.08
8225	1-K, 2-K, 3-K-3, 3-K-2	Medium	3/4	3/8	1/4	1/4	.08
8222	1-K, 2-K, 3-K-1, 3-K-2	Coarse	3/4	3/8	1/4	1/4	.08
STRAIGHT-LINE PATTERN							
8267	00-K, 0-K, 3-K-0	Fine	5/8	5/16	3/16	7/32	.05
8264	00-K, 0-K, 3-K-0	Medium	5/8	5/16	3/16	7/32	.05
8261	00-K, 0-K, 3-K-0	Coarse	5/8	5/16	3/16	7/32	.05
8268	1-K, 2-K, 3-K-1, 3-K-2	Fine	3/4	3/8	1/4	1/4	.08
8265	1-K, 2-K, 3-K-1, 3-K-2	Medium	3/4	3/8	1/4	1/4	.08
8262	1-K, 2-K, 3-K-1, 3-K-2	Coarse	3/4	3/8	1/4	1/4	.08

DROP-FORGINGS AND

WILLIAMS

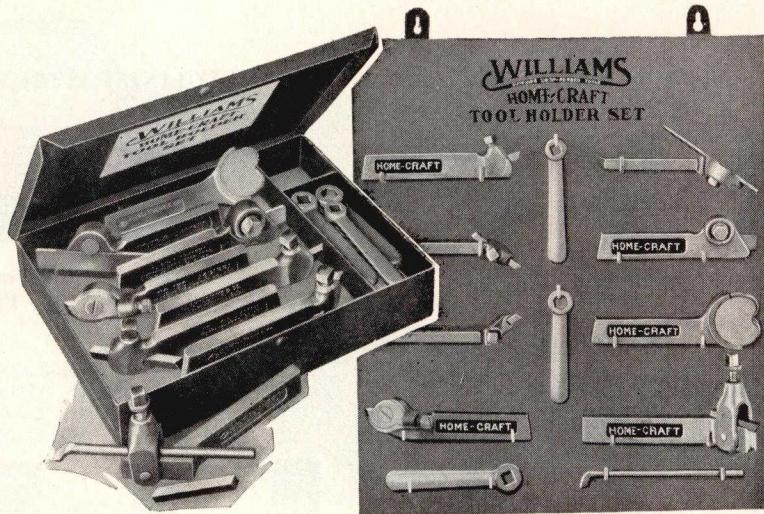
DROP-FORGED TOOLS

WILLIAMS' "HOME-CRAFT" TOOL HOLDER SET

"THE HOLDERS THAT HOLD"

High Speed Steel Cutters

Convenient — Efficient — Economical

**8 Tools**

In Metal Case, 7 Lbs.

On Wood Panel, 8.6 Lbs.

Williams' "Home-Craft" Set consists of 8 Tool Holders with 3 Wrenches for all lathe operations—Turning, Cutting-Off, Boring, Threading, Knurling—and supplies a convenient, efficient and economical equipment for those using small lathes with 7 to 10" swing.

The Holders, or Shanks, all drop-forged from a strong, tough grade of carefully selected steel, are specially heat-treated and hardened. The nose of the Holders is chamfered to permit convenient use in cramped quarters.

All Cutters are made of High Speed Steel and are carefully hardened.

Cutting-Off Blades (or Cutters) are ground ready for use.

The Threading-Tool Holder is supplied with a Formed Cutter, the point of which is ground to an included angle of 60°. In re-sharpening it is necessary to grind the top edge only; consequently the Cutter will always retain its proper form and angle.

The Boring-Tool is furnished with Bar 1/4" round by 5" long, with point offset and ground; a 1/4" square turning cutter is also included.

The Knurling-Tool is fitted with "Diamond" pattern Knurls for medium work (21 pitch). Knurls for fine (33 pitch) or coarse (14 pitch) work are available if desired. "Straight Line" Knurls can also be furnished.

The Set, when mounted on orange-colored panel, may be hung close to the lathe, thus keeping all tools in plain view. Set is also supplied in strong, steel case. See illustrations.

When ordering, please state whether Panel or Case is wanted.

DETAILS OF TOOLS IN SET

New No.	Old No.	Tool Holder	Size Shank	Cutter; High Speed Steel	Weight Each, Lbs.
2010-S	0-S H	Turning—Straight Shank.....	3/8 x 13/16	1/4 Square	.63
2010-R	0-R H	" —R. H. Offset Shank.....	3/8 x 13/16	1/4 Square	.64
2010-L	0-L H	" —L. H. Offset Shank.....	3/8 x 13/16	1/4 Square	.64
2040	0-K H	Knurling—.....	3/8 x 3/4	*Medium	.59
2020-S	N-20-R H	Cut-Off—R. H. Straight Shank.....	3/8 x 13/16	*3/32 x 5/8	.63
2020-R	N-30-R H	" —R. H. Offset Shank.....	3/8 x 13/16	*3/32 x 5/8	.69
2050	C-50H	Threading—with Formed Cutter.....	3/8 x 3/4	*Formed	.66
2030	15 H	Boring—Reversible—R. or L. Hand.....	3/8 x 3/4	{ 1/4 Square *1/4 rd. x 5	.88

* All finished, ready for use.

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DROP-FORGINGS AND

WILLIAMS DROP-FORGED TOOLS

WILLIAMS' "HOME-CRAFT" CARBIDE TURNING-TOOL HOLDERS

"THE HOLDERS THAT HOLD"

Straight
ShankRight Hand
Offset ShankLeft Hand
Offset Shank

In these Tools, the Cutter is held parallel to the shank. Consequently, Cutters can be so ground as to provide maximum support for the cutting edge. This feature, plus the extremely rigid Holder, is the recognized basis for the best performance of cemented Carbide Cutters.

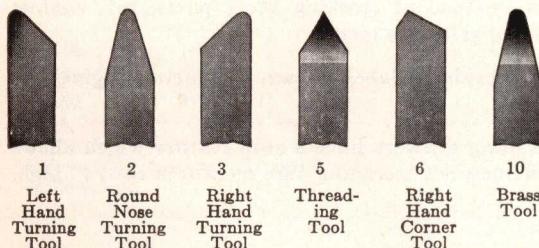
Holders are broached for square Carbide Cutters but are supplied WITHOUT CUTTERS.

Williams' Carbide Tipped Cutters, for use with the above holders, are available in two grades and four standard shapes of tips. See page 165 for full description.

Number		Holder, Size	For Cutter, Square Size	For Lathes of Approx. Swing, Inches	Weight Each, Lbs.
Straight Shank	Offset Shank				
TOS-H	TOR-H	TOL-H	3/8 x 13/16 x 6	1/4	7 to 10
					.67

WILLIAMS' "HOME-CRAFT"
High Speed Steel
FINISHED CUTTERS

1/4" Square

**SET OF 6 CUTTERS**

In Cardboard Box

Weight .25 Lb.

These ready-to-use "Home-Craft" Cutters are made of High Speed Steel. All are carefully ground to shape and hardened in electric furnaces, with atmosphere, temperature and time under absolute control. Long service is assured.

This Set of 6 Cutters of the forms illustrated cares for practically all lathe needs of school and home workers.

WILLIAMS' "HOME-CRAFT"
Drop-Forged
L A T H E D O G S



Williams' "Home-Craft" Dogs are drop-forged—not cast—and, consequently, are light but unusually strong and durable. Made especially for home-craft work; screws are hardened for lasting service.

Number	*Capacity	Wgt. Ea., Lbs.	Number
72-H	1/2	.28	72-H
73-H	3/4	.50	73-H
74-H	1	.91	74-H
76-H	1-1/2	1.1	76-H

*Opening in each Dog is 1/16" over listed "Capacity" to accommodate easily rough, or irregular pieces.

DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' LATHE TOOL ACCESSORY CABINET



No. THC-1

Total Weight, 81-1/4 Lbs.

The assortment of lathe tool accessories contained in this cabinet includes the most-called-for parts in all popular sizes. In addition to providing a convenient method of stocking these parts, this cabinet also acts as an effective display from which many additional sales are made.

The contents of each drawer are identified outside and inside. A label on each compartment gives the name and size of the accessory contained therein.

Cabinet is made of heavy gauge welded steel. Easy sliding drawers have a stop feature which allows the greater part of the drawer to be exposed. Overall cabinet, not including sign measures 18-1/4" high, 14-5/8" wide and 15-5/8" deep.

CONTENTS

HIGH SPEED CUTTERS

6	3/16"	Square
12	1/4"	Square
12	5/16"	Square
6	3/8"	Square
3	7/16"	Square

CUTTING OFF BLADES

6	3/32 x 5/8"
6	1/8 x 3/4"
6	1/8 x 7/8"
3	3/16 x 1"

FORMED CUTTERS
FOR THREADING TOOLS

2	C-50
2	C-51
2	C-52
1	C-53

SLEEVE BARS

1	1/2"
1	5/8"
1	3/4"
1	15/16"

PLAIN BARS

1	1/2"
1	5/8"
1	3/4"
1	15/16"

LIGHT BORING BARS

3	1/8 x 4"
6	3/16 x 4-1/2"
6	1/4 x 5"
6	5/16 x 6"
6	3/8 x 7"
4	7/16 x 8"

KNURLS

2 pr.	No. 8227	5/8" Fine Diamond
2 pr.	No. 8224	5/8" Medium Diamond
2 pr.	No. 8221	5/8" Coarse Diamond
2 pr.	No. 8267	5/8" Fine Straight
2 pr.	No. 8264	5/8" Medium Straight
2 pr.	No. 8261	5/8" Coarse Straight
2 pr.	No. 8228	3/4" Fine Diamond
2 pr.	No. 8225	3/4" Medium Diamond
2 pr.	No. 8222	3/4" Coarse Diamond
2 pr.	No. 8268	3/4" Fine Straight
2 pr.	No. 8265	3/4" Medium Straight
2 pr.	No. 8262	3/4" Coarse Straight

SET SCREW FOR TOOL HOLDERS

2	00S
4	0S
4	1S
4	2S
2	3S

WILLIAMS' HIGH SPEED STEEL CUTTERS

FOR WILLIAMS' TOOL HOLDERS

Require minimum of grinding only for use in Holders. All Cutters are hardened.

For Turning Tool Holders			For Williams' Boring Bars					
No.	CUTTER, SIZE		Weight Each, Lbs.	Bar Diam.	For Use at Angle of	CUTTER, SIZE		Weight Each, Lbs.
	Square	Length				Square	Length	
000	3/16	1 3/4	.02	1/2	{ 90°	3/16	1	.02
00 & 100	3/16	1 7/8	.02		{ 45°	3/16	1 1/2	.02
0 & 101	†1/4	2 3/8	.04	5/8	{ 90°	* 3/16	1	.02
1 & 201	†5/16	2 7/8	.08		{ 45°	3/16	1 1/2	.02
2 & 102	†3/8	3 3/8	.13	3/4	{ 90°	* 1/4	1 1/4	.03
3	7/16	3 3/4	.19		{ 45°	1/4	2	.04
4 & 103	1/2	4 1/8	.27	15/16	{ 90°	* 5/16	1 1/2	.04
5	5/8	4 3/4	.48		{ 45°	5/16	2 1/2	.06
6	3/4	5 1/2	.81	1 1/8	{ 90°	* 3/8	1 7/8	.07
† Cutters of these sizes are also suitable for turning when used in Threading-Tool, Nos. S-50 to S-52.								

* Cutters of these sizes are also suitable for use with Nos. 46, 47 and 48 Extension Shaper Tools.

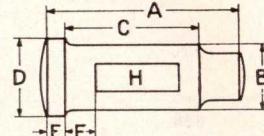
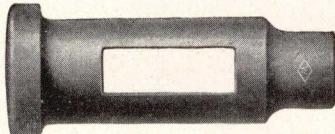
For Threading-Tool Holders			For Planing-Tool Holders				
No.	CUTTER, SIZE		Weight Each, Lbs.	No.	CUTTER, SIZE		Weight Each, Lbs.
	Square	Length			Flat	Length	
S-50	1/4	2 3/8	.04	40	1/4 x 3/8	2 1/2	.06
S-51	5/16	2 7/8	.08	401	5/16 x 7/16	3	.13
S-52	3/8	3 3/8	.13	41	3/8 x 1/2	3 1/2	.19
Turning-Tool Cutters marked † are suitable for turning work in Threading-Tool Holders. See table above.							

Number	Size	Weight Each, Lbs.	Number	Size	Weight Each, Lbs.
19 - 29	3/32 x 1/2	.06	19 - 29	1/8 x 1/2	.06
20 - 30	3/32 x 5/8	.07	20 - 30	5/32 x 5/8	.10
21 - 31	1/8 x 3/4	.14	21 - 31	3/16 x 3/4	.19
22 - 32	1/8 x 7/8	.19	22 - 32	1/4 x 7/8	.36
23 - 33	3/16 x 1	.35	23 - 33	5/16 x 1	.56
24 - 34	3/16 x 1-1/8	.46	24 - 34	3/8 x 1-1/8	.92
25 - 35	1/4 x 1-1/8	.69			

WILLIAMS' ♦ "VULCAN"
TOOL POST FITTINGS

UNFINISHED

**TOOL POSTS
Openings
Punched Out**



Number	5	10	20	23	28	30	40	50	60
Length, A.....	2 15/16	4 1/16	4 9/16	5	5 3/16	5 1/4	6 5/16	7 3/8	8 3/4
Body									
Diameter, B.....	1 1/32	1 1/4	1 5/8	1 7/16	1 9/16	1 13/16	2 1/16	2 1/4	2 31/32
Length, C.....	2	2 7/8	3 1/4	3 1/2	3 11/16	3 3/4	4 3/8	5	6
Base									
Diameter, D.....	1 7/32	1 5/8	2 1/8	1 7/8	2 1/16	2 5/16	2 5/8	2 15/16	3 5/8
Thickness, E.....	5/16	1/4	7/16	5/16	5/16	1/2	9/16	5/8	3/4
Base to Opening, F.....	7/16	1/2	13/16	5/8	5/8	15/16	1 3/16	1 3/8	1 1/2
Opening Size, H.....	{ 1 5/16	1 15/16	1 7/8	2 1/2	2 11/16	2 1/8	2 1/2	2 7/8	3 9/16
x 7/16	x 19/32	x 11/16	x 21/32	x 11/16	x 3/4	x 7/8	x 15/16	x 1	
For use with Wedge.....	5	10	15 & 18	15	15 & 18	18 & 20	30 & 40	60	
For use with Ring.....	5	10	11	14	18	20	30 & 40	60	
Weight Each, Lbs..	.5	1.1	2.2	1.6	2.2	3.1	4.7	6.6	14.2

**TOOL POST
WEDGES**



**For Changing
Angles of
Lathe Tools**

Number	5	10	11	15	18	20	30	40	60	65
Length.....	2 13/32	3	3 3/8	3 3/8	3 7/8	3 7/8	4 3/8	4 7/8	5 1/4	5 5/16
Width—Top	13/32	9/16	1/2	5/8	11/16	11/16	3/4	13/16	15/16	7/8
Width—Extreme....	1/2	21/32	19/32	23/32	3/4	13/16	7/8	15/16	1 3/32	1 1/32
Extreme Thickness..	11/32	31/64	25/64	7/16	15/32	17/32	1/2	21/32	3/4	29/32
Radius.....	3	2 7/8	4 5/8	4 5/8	4 1/2	4 3/4	5 1/2	5 3/4	6	5
For Use with Post...	5	10	20	20	30	30	40	40	50	
For Use with Ring ..	5	10	11	11	11 & 20	20	30	40	60	
Weight Each, Lbs..	.08	.19	.13	.19	.25	.30	.36	.56	.78	.91

**TOOL POST
RINGS**



**For Changing
Angles of
Lathe Tools**

Number	5	10	11	14	18	20	30	40	60
Diameter, Outside ..	2 1/4	2 15/16	3	3 3/16	3 7/16	3 1/2	3 1/2	4	4 1/2
Diameter, Hole ...	1 1/16	1 5/16	1 5/8	1 7/16	1 9/16	1 3/4	2	2	2 3/16
Thickness, Edge...	3/8	7/16	7/16	5/8	11/16	9/16	3/4	3/4	3/4
Radius of Concave..	3	2 7/8	4 5/8	4 5/8	4 1/2	4 3/4	5 1/2	5 3/4	6
For Use with Post..	5	10	20	23	28	30	40	40	50
For Use with Wedge	5	10	11 & 15	18 & 20	18	18 & 20	30	40	60
Weight Each, Lbs..	.30	.65	.56	.94	1.3	.94	1.3	1.9	.23

WILLIAMS' "VULCAN"
DROP-FORGED CLAMP LATHE DOGS



These are drop-forged from a strong, tough grade of carefully selected steel and are heat-treated after forging to increase further their strength and reduce the liability of springing.

The Screws, threaded U.S. Standard, are made of a special grade of steel, and are hardened and tempered. The Nuts are case-hardened. Extra Screws and Nuts carried in Stock.

The Nuts furnish ready means of arrangement for the minimum projection of Screws beyond the body of Dog and thus lessen the danger to the operator when tool is in use.

Number	Capacity		Screws		Weight Each, Lbs. Dog Complete	Number
	Maximum Opening	Distance Between Screws	Diameter	Length Under Head		
61	1 5/8	1 3/4	5/16	2 3/4	.53	61
62	1 7/8	2 1/4	3/8	3 5/16	.98	62
63	2 1/2	2 3/4	7/16	4 1/4	1.8	63
64	3 1/4	3 1/2	1/2	5 3/8	3.	64

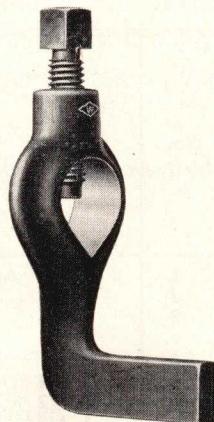
WILLIAMS' "VULCAN"
DROP-FORGED MILLING MACHINE DOGS

With Flat, Bent Tail

These are designed for taper work carried between centers on milling machines, the flat tail works in the head-slot without the back-lash unavoidable in Dogs with taper tail. They serve also as a heavy pattern Lathe Dog.

The heads are made of sufficient size to permit re-tapping for one or two larger sizes of screws as the threads wear.

The Screws, threaded U.S. Standard, are made of a special grade of steel and are hardened and tempered.



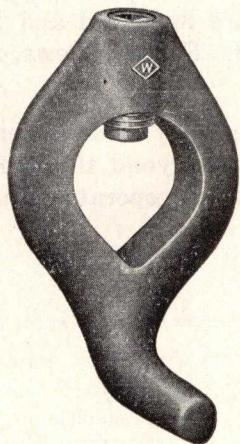
Number	Capacity	Screw		Weight Each, Lbs. Dog Complete	Number
		Diameter	Length Under Head		
42	1/2	3/8	1 1/4	.75	42
43	3/4	7/16	1 5/8	.93	43
44	1	1/2	2	1.2	44
45	1 1/4	1/2	2 1/4	1.3	45
46	1 1/2	9/16	2 3/8	1.6	46
47	1 3/4	5/8	2 1/2	1.8	47
48	2	5/8	2 7/8	2.1	48

DROP-FORGINGS AND

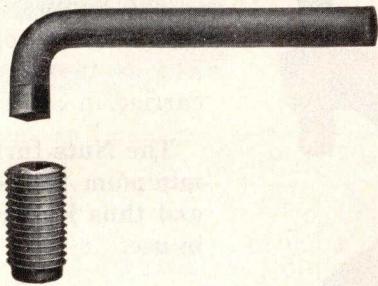
WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' ♦ "VULCAN"
DROP-FORGED LATHE DOGS
WITH BENT TAIL AND ONE SCREW



Safety Dog
and Screw



Safety Screw
and Wrench



Non-Safety Dog
with
Square Head Screw

Furnished with
Interchangeable Screws,
either Safety or Non-Safety

Full description on opposite page.

Dogs with Safety Screws will be supplied, unless otherwise specified.

No.	Capacity	SCREWS				Weight Each, Lbs. with Dog Either Screw	No.		
		Square Head		Safety					
		Size		Size					
		Diam.	Length Under Head	Diam.	Extreme Length				
1	3/8	7/16	1	7/16	5/8	.32	1		
2	1/2	9/16	1 1/4	9/16	13/16	.56	2		
3	3/4	5/8	1 5/8	5/8	1 1/16	1.	3		
4	1	5/8	2	5/8	1 1/4	1.5	4		
5	1 1/4	3/4	2 1/4	3/4	1 3/8	1.9	5		
6	1 1/2	7/8	2 7/16	7/8	1 11/16	2.6	6		
7	1 3/4	7/8	2 7/16	7/8	1 11/16	3.3	7		
8	2	1	2 3/4	1	1 7/8	4.1	8		
9	2 1/2	1 1/8	3	1 1/8	2	5.4	9		
10	3	1 1/4	3 1/4	1 1/4	2 1/8	7.	10		
11	3 1/2	1 3/8	3 1/2	1 3/8	2 1/2	10.	11		
12	4	1 1/2	3 3/4	1 1/2	2 5/8	12.	12		
13	5	1 5/8	4 1/2	1 5/8	3 3/8	20.	13		

Unless otherwise specified, a Wrench will be supplied with Safety Dogs at extra price.

♦ REGISTERED TRADE MARK

1-52

WILLIAMS' ♦ "VULCAN"
DROP-FORGED HEAVY SERVICE LATHE DOGS
WITH BENT TAIL AND TWO SCREWS



Non-Safety Dog
with
Square Hd. Screws

Furnished with
Interchangeable Screws,
either Safety or Non-Safety

Safety Dog
and Screws

Safety-for-the-operator and better balance when on the lathe are material improvements which have been attained in this design.

The Screws are of special steel, hardened and tempered, and are threaded U. S. Standard, except that those above 1 inch diameter have eight threads per inch. They are supplied in two types, Safety and Non-Safety, which are interchangeable in corresponding Dogs.

When ordering extra Screws, please state whether Safety or Non-Safety type is wanted; if latter, specify also diameter of screw.

Dogs with Safety Screws will be supplied, unless otherwise specified.

No.	Capacity	SCREWS				Weight Each, Lbs. Dog with Either Screw	No.		
		Square Head Size		Safety Size					
		Diam.	Length Under Head	Diam.	Extreme Length				
112	4	1 1/2	3 3/4	1 1/2	2 5/8	15	112		
113	5	1 5/8	4 1/2	1 5/8	3 3/8	21.5	113		
114	6	1 5/8	4 1/2	1 5/8	3 3/8	30.7	114		

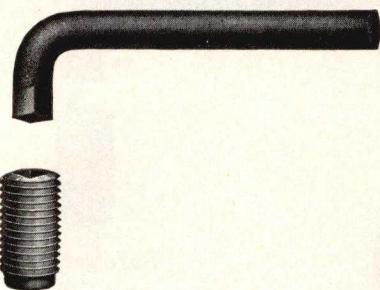
Unless otherwise specified, a Wrench will be supplied with Safety Dogs at extra price.

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "VULCAN"
DROP-FORGED LATHE DOGS
WITH STRAIGHT TAIL AND ONE SCREW



Safety Dog
and Screw



Safety Screw
and Wrench



Non-Safety Dog
with
Square Hd. Screws

Furnished with
Interchangeable Screws
either Safety or Non-Safety

Full description on opposite page.

Dogs with Safety Screws will be supplied, unless otherwise specified.

No.	Capacity	SCREWS				Weight Each, Lbs. Dog with Either Screw	No.		
		Square Head		Safety					
		Size		Size					
		Diam.	Length Under Head	Diam.	Extreme Length				
21	3/8	7/16	1	7/16	5/8	.19	21		
22	1/2	9/16	1 1/4	9/16	13/16	.34	22		
23	3/4	5/8	1 5/8	5/8	1 1/16	.66	23		
24	1	5/8	2	5/8	1 1/4	1.1	24		
25	1 1/4	3/4	2 1/4	3/4	1 3/8	1.5	25		
26	1 1/2	7/8	2 7/16	7/8	1 11/16	2.	26		
27	1 3/4	7/8	2 7/16	7/8	1 11/16	2.7	27		
28	2	1	2 3/4	1	1 7/8	3.5	28		
29	2 1/2	1 1/8	3	1 1/8	2	4.6	29		
30	3	1 1/4	3 1/4	1 1/4	2 1/8	6.	30		
31	3 1/2	1 3/8	3 1/2	1 3/8	2 1/2	9.	31		
32	4	1 1/2	3 3/4	1 1/2	2 5/8	11.	32		
33	5	1 5/8	4 1/2	1 5/8	3 3/8	19.5	33		

Unless otherwise specified, a Wrench will be supplied with Safety Dogs at extra price.

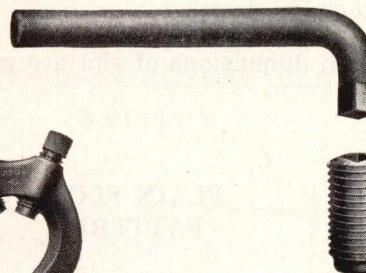
♦ REGISTERED TRADE MARK

1-52

WILLIAMS' "VULCAN"
DROP-FORGED HEAVY SERVICE LATHE DOGS
WITH STRAIGHT TAIL AND TWO SCREWS



Non-Safety Dog
with
Square Hd. Screw



Safety Screw
and Wrench

Furnished with
Interchangeable Screws,
either Safety or Non-Safety



Safety Dog and Screws

Safety-for-the-operator and better balance when on the lathe are material improvements which have been attained in this design.

The Screws are of special steel, hardened and tempered, and are threaded U. S. Standard, except that those above 1 inch diameter have eight threads per inch. They are supplied in two types, Safety and Non-Safety, which are interchangeable in corresponding Dogs.

When ordering extra Screws, please state whether Safety or Non-Safety type is wanted; if latter, specify also diameter of screw.

Dogs with Safety Screws will be supplied, unless otherwise specified.

No.	Capacity	SCREWS				Weight Each, Lbs. Dog with Either Screw	No.		
		Square Head Size		Safety Size					
		Diam.	Length Under Head	Diam.	Extreme Length				
132	4	1 1/2	3 3/4	1 1/2	2 5/8	13.	132		
133	5	1 5/8	4 1/2	1 5/8	3 3/8	20.5	133		
134	6	1 5/8	4 1/2	1 5/8	3 3/8	28.	134		

Unless otherwise specified, a Wrench will be supplied with Safety Dogs at extra price.

♦ REGISTERED TRADE MARK

DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' ♦ "VULCAN"
DROP-FORGED STRAP CLAMPS

These forgings are made from a strong, tough grade of carefully selected steel and are heat-treated after forging to increase their strength and stiffness.

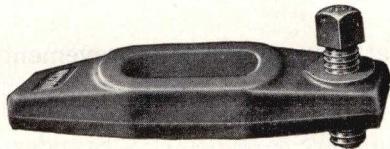
On Planer, Lathe, Drill Press, Milling and Boring Machine work they are time-saving and effective—far more efficient than any make-shift clamp.

Because of draft or taper on forgings, minimum dimensions of slot are given.



**PLAIN SLOT
PATTERN**

No.	Length	Width		Thickness		Slot; Min. Dimensions		Weight Ea., Lbs.	No.
		Ends	Center	Ends	Center	Length	Width		
54	4	1 3/16	1 5/8	1/2	3/4	1 3/8	11/16	1.	54
56	6	1 1/4	1 3/4	9/16	7/8	2 1/16	11/16	1.8	56
58	8	1 1/2	2 1/8	3/4	1 1/8	2 13/16	13/16	3.8	58
59	10	1 3/4	2 1/2	15/16	1 3/8	3 11/16	15/16	6.6	59



**ADJUSTABLE STEP
PATTERN**

No.	Length	Width		Thickness		Slot; Min. Dimensions		Screws		Wgt. Each, Lbs.	No.	
		Ends	Center	Ends	Center	Length	Width	Diam.	Lgh. Under Head	Extra Screws	Complete Clamps	
54A	4	1 3/16	1 5/8	1/2	3/4	1 3/8	11/16	1/2	1 1/4	.06	1.1	54A
56A	6	1 1/4	1 3/4	9/16	7/8	2 1/16	11/16	5/8	1 1/2	.19	2.	56A
58A	8	1 1/2	2 1/8	3/4	1 1/8	2 13/16	13/16	3/4	1 3/4	.31	3.9	58A
59A	10	1 3/4	2 1/2	15/16	1 3/8	3 11/16	15/16	7/8	2 1/8	.5	7.1	59A



**GOOSE NECK
PATTERN**

No.	Length	Width		Thickness		Slot; Min. Dimensions		Neck Offset	Weight Ea., Lbs.	No.
		Ends	Center	Ends	Center	Length	Width			
74	4	1 3/16	1 5/8	3/8 & 1/2	3/4	15/16	11/16	13/16	1.	74
76	6	1 1/4	1 3/4	7/16 & 9/16	7/8	1 11/16	11/16	15/16	2.	76
78	8	1 1/2	2 1/8	9/16 & 3/4	1 1/8	2 7/16	13/16	1 1/8	4.2	78

♦ REGISTERED TRADE MARK

1-52

WILLIAMS' "VULCAN"
DROP-FORGED STRAP CLAMPS

Williams' Universal Adjustable Strap Clamps are designed for holding work in planers, boring mills, drill presses, milling machines, etc. Ideal for irregular shapes and varying sizes. Position of the saddle may be changed to maintain vertical, right angle positioning of the tie-bolt.

UNIVERSAL ADJUSTABLE
PATTERN



No.	Length	Width of Clamp	Adjustment	Max. "T" Slot Bolt, Size Inches	Weight Each, Lbs.			
					No.	Complete	No.	Extra Saddles
21	5 1/16	1 5/8	2 1/4	5/8	21	1.3	21S	.19
22	8	2 1/8	4	3/4	22	3.1	22S	.31
23	12	2 3/4	6 1/4	1	23	9.8	23S	.75

FINGER PATTERN
SINGLE END



No.	Length	Width		Thickness		Slot; Min. Dimensions		Finger Dimensions	Weight Ea., Lbs.	No.
		Flat End	Center	Flat End	Center	Length	Width			
44	4	1 3/16	1 5/8	7/16	3/4	1 3/8	11/16	1/2 x 1/2	.83	44
46	6	1 1/4	1 3/4	1/2	7/8	1 15/16	11/16	5/8 x 5/8	1.6	46
48	8	1 1/2	2 1/8	5/8	1 1/8	2 9/16	13/16	3/4 x 3/4	3.3	48

FINGER PATTERN
DOUBLE END



No.	Length	Width Center	Thickness Center	Min. Diameter Hole	Finger Dimensions	Weight Ea., Lbs.	No.
30	3	1 1/2	5/8	11/16	1/2 x 1/2	.37	30
35	3 1/2	1 5/8	3/4	11/16	5/8 x 5/8	.62	35
40	4	1 13/16	7/8	13/16	3/4 x 3/4	.87	40

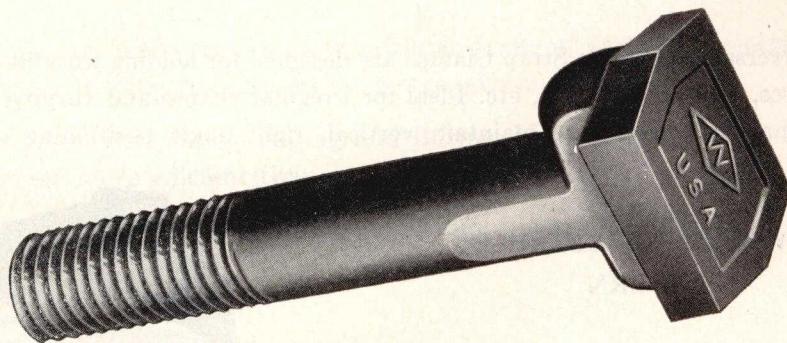
"U" PATTERN



No.	Length	Maximum Width	Thickness	Slot; Min. Dimensions		Finger Dimensions	Weight Ea., Lbs.	No.
				Length	Width			
64	4 1/2	1 3/4	3/4	3 1/2	11/16	1/2 x 1/2	1.	64
66	6 5/8	2	7/8	5 1/2	11/16	5/8 x 5/8	2.	66
68	8 3/4	2 1/2	1 1/8	7 3/8	13/16	3/4 x 3/4	4.	68
110	10	2 3/4	1 1/4	9	15/16	15/16 x 15/16	5.8	110
112	12	3 1/4	1 3/4	11	1 1/16	1 1/16 x 1 1/16	10.3	112

♦ REGISTERED TRADE MARK

WILLIAMS' SET-UP ACCESSORIES



T-SLOT BOLTS

Williams' T-Slot Bolts are used for setting-up work on planers, shapers, milling machines and other similar applications. Forged from a superior grade of steel to withstand severe machine shop use. Accurately designed to fit T-Slots, threaded National Coarse (U.S.S.), ready for use. These T-Slot Bolts will not turn in machine table or break out machine table slots. Available in 3/8, 1/2, 5/8, 3/4, 7/8 and 1" T-Slot sizes with lengths as listed in table below.

T-SLOT BOLT DIMENSIONS AND WEIGHTS

Lengths Under Head in Inches — Weights Each, in Pounds

3/8" T-SLOT SIZE		1/2" T-SLOT SIZE		5/8" T-SLOT SIZE		3/4" T-SLOT SIZE		7/8" T-SLOT SIZE		1" T-SLOT SIZE	
Length	Weight	Length	Weight	Length	Weight	Length	Weight	Length	Weight	Length	Weight
1	.05	1 1/4	.14								
1 1/4	.05	1 1/2	.16	1 1/2	.27						
1 1/2	.06	1 3/4	.17								
1 3/4	.07	2	.18	2	.29	2	.49				
2	.08	2 1/4	.20	2 1/4	.32						
2 1/4	.08	2 1/2	.21	2 1/2	.33	2 1/2	.55	2 1/2			
2 1/2	.09	2 3/4	.22	2 3/4	.36						
3	.11	3	.24	3	.37	3	.6	3		3	
3 1/2	.12	3 1/2	.26	3 1/2	.42	3 1/2	.67	3 1/2			
4	.14	4	.29	4	.47	4	.73	4		4	
4 1/2	.15	4 1/2	.31	4 1/2	.52	4 1/2	.79	4 1/2			
5	.16	5	.35	5	.56	5	.84	5		5	
5 1/2	.18			5 1/2	.6	5 1/2	.91	5 1/2			
6	.19	6	.4	6	.64	6	.96	6		6	
7	.22	7	.44	7	.71	7	1.1	7		7	
8	.26	8	.49	8	.75	8	1.2	8		8	
9	.29	9	.55	9	.87	9	1.3	9		9	
10	.32	10	.61	10	.96	10	1.4	10		10	
		12	.71	12	1.1	12	1.7	12		12	
				14	1.3	14	1.9	14		14	
				16	1.5	16	2.2	16		16	
				18	1.7	18	2.4	18		18	
				20	1.8	20	2.6	20		20	
						24	3.2	24		24	
						30	3.9	30		30	

WILLIAMS' SET-UP ACCESSORIES

These Hexagon Nuts are specially designed for use with Williams' T-Slot Bolts. Threaded National Coarse (U.S.S.) and case hardened.

Available in sizes for 3/8, 1/2, 5/8, 3/4 and 7/8" bolt diameters.

No.	Bolt Diameter, Inches	Threads Per Inch	Thickness, Inches	Across Flats, Inches	Weight Each, Lbs.
3 HN	3/8	16	7/16	11/16	.04
4 HN	1/2	13	5/8	7/8	.09
5 HN	5/8	11	3/4	1-1/16	.14
6 HN	3/4	10	7/8	1-1/4	.24
7 HN	7/8	9	1	1-7/16	.34

HEXAGON NUTS FOR T-SLOT BOLTS

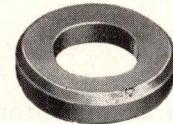


These Flat Washers are extra thick to resist bending and have a beveled edge on one side.

Available in sizes for 3/8, 1/2, 5/8, 3/4 and 7/8" bolt diameters.

Bolt Diameter, Inches	Outside Diameter, Inches	Thickness, Inches	Weight Each, Lbs.
3/8	7/8	1/8	.02
1/2	1	3/16	.03
5/8	1-1/4	1/4	.06
3/4	1-1/2	1/4	.06
7/8	1-3/4	1/4	.15

FLAT WASHERS FOR T-SLOT BOLTS



Williams' T-Slot Nuts are used for setting-up work on planers, shapers, milling machines, etc., where studs are to be used in place of T-Slot Bolts.

No.	T-Slot Size	Stud Diam.	Threads Per Inch				Wgt. Each, Lbs.
5 TN	5/8	1/2	13	1-1/8	13/32	1-1/4	
6 TN	3/4	5/8	11	1-5/16	17/32	1-1/2	
7 TN	7/8	3/4	10	1-1/2	9/16	1-3/4	.42
8 TN	1	7/8	9	1-3/4	5/8	2	.63
10 TN	1-1/4	1	8	2	7/8	2-3/8	1.13

T-SLOT NUTS



Williams' Set-Up Wedges are used for setting-up work on planers, shapers, milling machines and other similar applications.

No.	Length	Width	Thick End	Weight Each, Lbs.
3 WG	3	1	1/4	
5 WG	5	1	1/2	
6 WG	6	1-1/4	3/4	

SET-UP WEDGES



WILLIAMS' ♦ "VULCAN"
DROP-FORGED HEAVY SERVICE "C" CLAMPS



These are drop-forged from a strong, tough grade of carefully selected steel. Specially heat-treated to increase further their strength and reduce the liability of springing, they are the strongest "C" Clamps on the market.

The Screws, threaded U. S. Standard, are made of a special grade of steel and are hardened and tempered.

With Long Screws the minimum capacity of all Clamps will be 0.

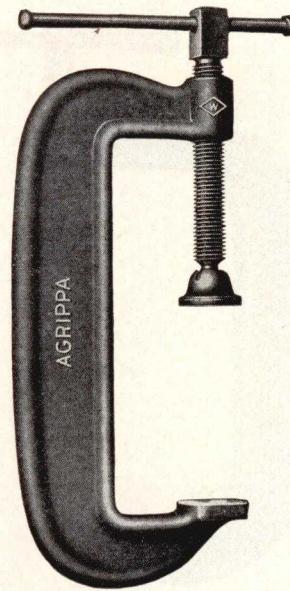
Clamps with Standard Screws will be furnished, unless otherwise specified.

No.	Capacity		Depth of Throat Center of Screw	Extreme Dimensions of Body		Standard Screw		Weight Each Lbs.			No.		
	Max.	Min. With Std. Screw		Length	Width	Diam.	Length Under Head	Extra Screws		Complete with Standard Screw			
								Standard	Long				
0	3/4	0	3/4	2 1/4	2	5/16	1 1/2	.04	....	.25	0
1	1 1/4	0	1 1/8	3 1/4	2 3/4	3/8	2 1/4	.06	....	.75	1
1 1/2	1 3/4	11/16	1 1/2	4 1/4	3 5/8	1/2	2 1/4	.13	.19	1.6	1 1/2		
2	2 1/4	7/8	1 3/4	5 1/2	4 1/2	5/8	2 7/8	.31	.31	3.1	2		
3	3 1/4	1 5/16	2 3/8	7 1/4	5 3/4	3/4	3 3/4	.50	.63	6.5	3		
4	4 1/2	2	2 3/4	8 7/8	6 1/2	7/8	4 1/2	.81	1.1	9.7	4		
5	5 1/2	2 1/2	3 1/8	10 3/8	7	7/8	5 3/8	.94	1.3	12.3	5		
6	6 1/2	3 1/16	3 3/8	12	7 7/8	1	5 7/8	1.4	1.9	16.5	6		
8	8 1/2	4 1/4	3 3/4	14 3/8	8 1/2	1 1/8	7	2.	3.	24.	8		
10	10 1/2	6 3/8	4 1/8	16 7/8	9	1 1/8	7	2.	4.1	28.	10		
12	12 1/2	7 5/8	4 1/2	19 3/8	9 3/4	1 1/4	8	3.	5.2	40.	12		

♦ REGISTERED TRADE MARK

1-52

WILLIAMS' ♦ "AGRIPPA"
DROP-FORGED GENERAL SERVICE "C" CLAMPS



The design of these lighter Clamps enables them to provide the service formerly rendered by the heavier and clumsier steel clamps made by other processes. They are drop-forged from a special grade of strong, tough steel and are heat-treated. This process increases still further their strength and reduces any liability of springing.

The Screws, fitted with adjustable handle, are made of special steel, hardened and tempered; threaded U. S. Standard. The Swivels are drop-forged.

No.	Capacity		Depth of Throat from Center of Screw	Extreme Dimensions of Body		Screw		Size Handle		Weight Each, Lbs.			No.
	Max.	Min.		Length	Width	Diam.	Length under Hd. inc. Swivel	Diam.	Lgth.	Extra Screw, Handle and Swivel	Extra Swivel Only	Clamp Complete	
103	3	0	2	6 7/8	4 3/8	5/8	5 5/8	5/16	5 1/2	.69	.13	2.6	103
104	4	0	2 3/8	8 1/4	5 1/8	3/4	6 7/8	3/8	7	1.2	.19	4.3	104
106	6	2	2 1/2	10 3/8	5 3/8	3/4	6 7/8	3/8	7	1.2	.19	5.5	106
108	8	4	2 5/8	12 1/2	5 1/2	3/4	6 7/8	3/8	7	1.2	.19	7.	108
110	10	6	2 3/4	14 5/8	5 3/4	3/4	6 7/8	3/8	7	1.2	.19	7.5	110
112	12	8	2 7/8	16 7/8	6	3/4	6 7/8	3/8	7	1.2	.19	9.5	112
115	15	10	3 1/16	20 1/4	6 1/2	7/8	8 1/8	7/16	8	1.9	.25	13.5	115
118	18	13	3 1/4	23 1/2	7	7/8	8 1/8	7/16	8	1.9	.25	17.	118

♦ REGISTERED TRADE MARK

**WILLIAMS' DEEP THROAT STANDARD PATTERN
DROP-FORGED "C" CLAMPS
FOR LIGHT DUTY**



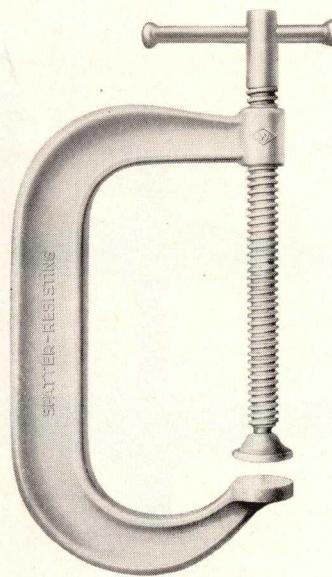
Standard for body-builders, woodworkers and kindred trades. All parts except screws are shot-blasted.

Especially designed for use where the clearance provided by a deep throat is required, as in body building, welding, wood working, etc. Drop-forged from an unusually strong special steel and heat-treated for maximum strength, they combine dependable strength with minimum weight.

The Screws, fitted with adjustable handle, are made from tough, wrought steel, heat-treated and threaded especially for strength and rapid adjustment. Furnished with wrought steel Swivel, as illustrated.

No.	Capacity		Depth of Throat from Center of Screw	Extreme Dimensions of Body		Screw		Weight Each, Lbs.			No.
	Max.	Min.		Length	Width	Diam.	Length Over All	Screw and Swivel	Extra Swivel Only	Clamps Complete	
402	2	0	2	4 7/8	3 3/4	1/2	4 3/4	.28	.03	1.1	402
403	3	0	2 3/8	6 1/8	4 1/8	1/2	6	.34	.03	1.5	403
404	4	0	2 3/4	7 5/8	4 3/4	5/8	8 1/8	.69	.06	2.3	404
406	6	0	3 5/8	10 1/4	6	5/8	10 1/4	.81	.06	3.8	406
408	8	2	4 1/2	12 3/4	7	3/4	10 5/8	1.3	.06	5.5	408
410	10	3	5 3/8	15 1/4	8 1/8	3/4	11 3/4	1.4	.06	8.3	410
412	12	4	5 3/4	18	9 3/8	7/8	13	2.1	.13	12.5	412

**WILLIAMS' DEEP THROAT SPATTER RESISTING
DROP-FORGED "C" CLAMPS
FOR LIGHT DUTY**



Spatter-Resisting for welding. Cadmium-plated to resist the adherence of welding spatter to the swivel and screw.

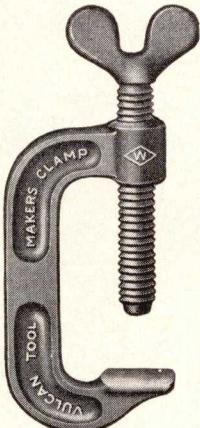
Especially designed for use where the clearance provided by a deep throat is required, as in body building, welding, wood working, etc. Drop-forged from an unusually strong special steel and heat-treated for maximum strength, they combine dependable strength with minimum weight.

The Screws, fitted with adjustable handle, are made from tough, wrought steel, heat-treated and threaded especially for strength and rapid adjustment. Furnished with wrought steel Swivel, as illustrated.

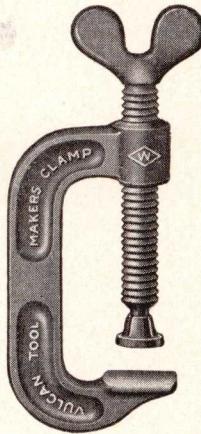
Standard Clamps will be furnished unless otherwise specified.

No.	Capacity		Depth of Throat from Center of Screw	Extreme Dimensions of Body		Screw		Weight Each, Lbs.			No.
	Max.	Min.		Length	Width	Diam.	Length Over All	Screw, and Swivel	Extra Swivel Only	Clamps Complete	
402-S	2	0	2	4 7/8	3 3/4	1/2	4 3/4	.28	.03	1.1	402-S
403-S	3	0	2 3/8	6 1/8	4 1/8	1/2	6	.34	.03	1.5	403-S
404-S	4	0	2 3/4	7 5/8	4 3/4	5/8	8 1/8	.69	.06	2.3	404-S
406-S	6	0	3 5/8	10 1/4	6	5/8	10 1/4	.81	.06	3.8	406-S
408-S	8	2	4 1/2	12 3/4	7	3/4	10 5/8	1.3	.06	5.5	408-S
410-S	10	3	5 3/8	15 1/4	8 1/8	3/4	11 3/4	1.4	.06	8.3	410-S
412-S	12	4	5 3/4	18	9 3/8	7/8	13	2.1	.13	12.5	412-S

WILLIAMS' "VULCAN"
DROP-FORGED TOOL-MAKERS' "C" CLAMPS



With Plain Screw



With Swivel Screw

These Clamps are drop-forged from a strong, tough grade of steel and are heat-treated after forging to increase further their strength and reduce the liability of springing.

The Screws, with wings formed to permit use of lever, are supplied in two styles — Swivel and Plain. They are drop-forged from a special grade of steel and are hardened and tempered; threaded U. S. Standard.

Clamp bodies are shot-blasted; screws, black.

Clamps with Swivel Screw will be furnished, unless otherwise specified.

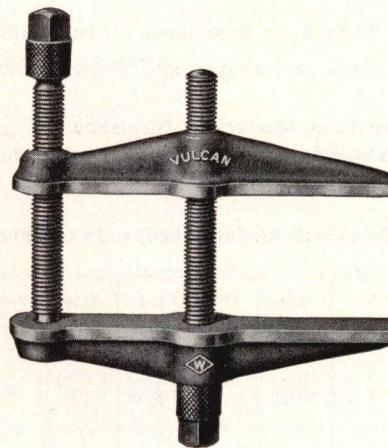
No.	Capacity		Depth of Throat	Extreme Dimensions		Screw		Weight Each, Lbs.			No.
	Max.	Min.		Length	Width	Diam.	Length	Extra Screw Only	Extra Swivel Only	Clamp Complete	
WITH PLAIN SCREW											
201	1	0	11/16	2 1/8	1 1/2	5/16	1 11/16	.05	.....	.25	201
202	2	5/16	13/16	3 3/8	1 7/8	3/8	2 7/16	.08	.....	.33	202
203	3	11/16	15/16	4 1/2	2 1/8	3/8	3 3/16	.13	.....	.56	203
204	4 1/4	1 3/16	1 1/8	6 3/8	2 1/2	7/16	4 1/8	.21	.....	.9	204

WITH SWIVEL SCREW

201	3/4	0	11/16	2 1/8	1 1/2	5/16	1 11/16	.06	.01	.25	201
202	1 3/4	5/16	13/16	3 3/8	1 7/8	3/8	2 7/16	.10	.01	.33	202
203	2 3/4	11/16	15/16	4 1/2	2 1/8	3/8	3 3/16	.13	.01	.56	203
204	4	1 3/16	1 1/8	6 3/8	2 1/2	7/16	4 1/8	.21	.02	.9	204

WILLIAMS' ♦ "VULCAN"

DROP-FORGED MACHINISTS' CLAMPS



These Clamps are drop-forged from a strong, tough grade of carefully selected steel; all are heat-treated to increase still further their strength and to reduce the liability of springing.

The knurled portion of the hardened and tempered Screws permits rapid and easy adjustment.

The edges of the jaws are ground bright, thus adding to the appearance of the Clamp.

When ordering extra Screws specify whether for *end* or *center*; lengths given are under-head dimensions and prices are for each of either screw.

No.	Capacity		Screws				Weight Each, Lbs.		No.	
	Maxi-mum Opening	Length Jaw from Screw	End		Center		Extra Screws Each	Complete Clamp		
			Diam.	Length	Diam.	Length				
301	1 1/4	1 3/4	5/16	2 1/8	5/16	2 5/8	.07	.6	301	
302	2 1/4	2 1/4	3/8	3 1/4	3/8	3 15/16	.14	1.4	302	
303	3 1/4	2 3/4	7/16	4 5/8	7/16	5 1/4	.23	1.9	303	
304	4 1/4	3 1/4	1/2	5 3/4	1/2	6 1/2	.38	3.1	304	

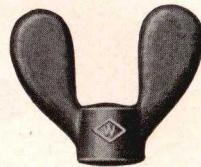
♦ REGISTERED TRADE MARK

WILLIAMS' DROP-FORGED THUMB NUTS

BLANK OR TAPPED



Type A



Type B

These are drop-forged from a fine grade of steel that drills and taps readily; they are furnished either Blank or Tapped, tumbled smooth.

Nuts tapped U. S. Standard threads in stock. Other threads to order. Unless otherwise specified, orders for Tapped Nuts will be supplied with U. S. Standard threads.

Tapped Nuts have base faced at right angle to hole.

Special sizes and shapes and Tobin Bronze Nuts to order.

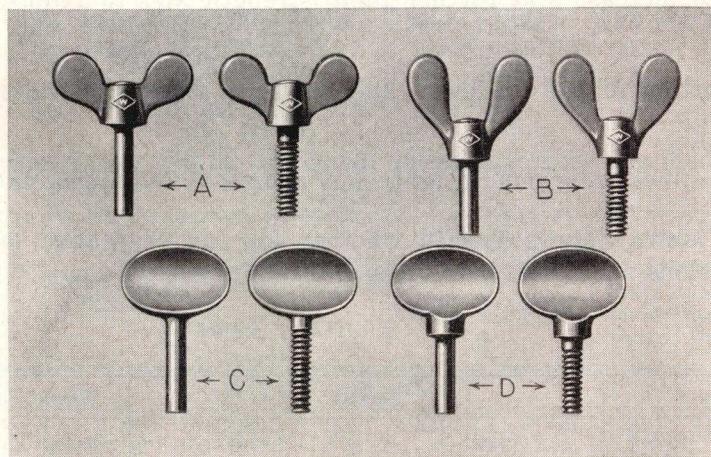
When tapping is ordered, a commercial product is furnished. If additional accuracy is required an extra charge, consistent with the special requirements, will be made. When ordering indicate pattern (A or B) by letter.

Tapped Thumb Nuts will be furnished, unless otherwise specified.

	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4
For Bolt; Size.....										
U. S. Std. (Natl. Coarse)—Threads Per Inch.....	40	24	20	18	16	14	13	12	11	10
Extreme Width across Wings										
Type A.....	3/4	15/16	1 1/8	1 7/16	1 11/16	2	2 1/4	2 9/16	2 3/4	3 1/4
Type B.....	25/32	1	1 3/16	1 3/8	1 5/8	1 7/8	2 1/16	2 3/8	2 9/16	3
Diameter, Top of Barrel.....	1/4	5/16	3/8	7/16	17/32	5/8	21/32	3/4	13/16	15/16
Weight per 100, Blank or Threaded.....	.62	1.3	2.3	4.	6.2	9.1	12.7	16.2	22.5	37.

WILLIAMS' DROP-FORGED THUMB SCREWS

All Types Furnished Either Blank or Threaded



Drop-forged from a fine grade of steel that threads readily and tumbled smooth. Special sizes and shapes and Tobin Bronze Screws to order.

Dies for the following Screws have not yet been made, consequently these sizes are not now carried in stock; 7/16 inch diameter Type B, 9/16 inch diameter Types A and B, 3/4 inch diameter Types A, B and D.

(Continued on next page)

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WILLIAMS' DROP-FORGED THUMB SCREWS

BLANK, OR THREADED

See illustrations on opposite page

Lengths, longer than those listed, can be furnished specially from available dies; intermediate lengths take price of next longer length.

Screws with U. S. Standard threads in stock. Whitworth Standard supplied at regular prices; **other threading to order.** Unless other threads are specified, Threaded Screws will be furnished with U. S. Standard threads.

Screws with special points can be supplied to order.

When ordering indicate pattern by letter.

When threading is ordered, a commercial product is furnished. If additional accuracy is required an extra charge, consistent with the special requirements, will be made.

Threaded Thumb Screws will be furnished, unless otherwise specified.

Width of Head	Diameter Screw and U. S. Standard (Natl. Coarse) Threads per Inch										Width of Head
	1/8 40	3/16 24	1/4 20	5/16 18	3/8 16	7/16 14	1/2 13	9/16 12	5/8 11	3/4 10	
Type A B C-D	3/4 25/32 19/32	15/16 1 27/32	1 1/8 1 3/16 1	1 7/16 1 3/8 1 3/16	1 11/16 1 5/8 1 3/8	2 1 9/16	2 1/4 2 1/16 1 3/4	..... 1 7/8	2 3/4 2 9/16 2 1/16	..... *2 1/4	Type A B C-D

* Type C only; D not made.

BLANK, Approximate Weight per 100

Length Under Head											Length Under Head
1/4											1/4
1/2											1/2
3/4											3/4
1 1/4	.94	2.1	4.	6.2	10.	13.7	16.2	21.	26.8	38.7	1
1 1/2											1 1/4
1 3/4											1 1/2
2											1 3/4
2 1/4		3.4	5.3	7.8	12.5	16.5	21.2	27.5	34.3	53.	2
2 1/2											2 1/4
2 3/4											2 1/2
3											2 3/4
3 1/2				7.8	10.6	16.	21.2	27.	35.3	46.5	66.
4					13.7	19.3	26.2	32.5	42.8	54.6	78.7

THREADED, Approximate Weight per 100

U. S. Standard Threads will be furnished, unless otherwise specified.

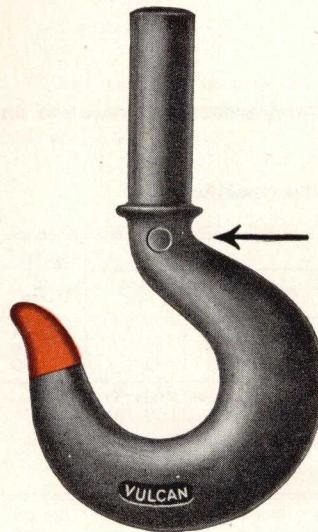
1/4											1/4
1/2											1/2
3/4											3/4
1	.79	1.8	3.4	5.2	8.4	11.5	13.6	17.6	22.5	32.5	1
1 1/4											1 1/4
1 1/2											1 1/2
1 3/4											1 3/4
2											2
2 1/4		2.9	4.5	6.5	10.5	13.9	17.8	23.1	28.8	44.5	2 1/4
2 1/2											2 1/2
2 3/4											2 3/4
3				6.5	8.9	13.4	17.8	22.7	29.7	39.	3
3 1/2					11.5	16.2	22.	27.3	36.	45.9	66.1
4											4

WILLIAMS' ♦ "VULCAN"

DROP-FORGED HOIST HOOKS

The Hooks with the Orange Tip

SHANK PATTERN



Heat Treating. After forging, every "Vulcan" Hook is accurately heat-treated for maximum strength and toughness—the liability of breakage is reduced to the minimum.

Proof-Testing. To insure proper service at listed capacity every hook, after heat-treatment is proof-tested on a standard tension machine to *fifty per cent beyond* its rated "Safe Working Load." Each Hook so tested is stamped O, as illustrated, and hence can be readily identified as "proof-tested."

(Continued on following page)

† Shanks of Nos. 13, 14, 15, 15A, 16 and 16A can be made longer if desired at an additional charge per extra inch or fraction thereof.

‡ 15A and 16A Hooks are made from special alloy steel; others from carbon steel.

*Hook shanks, Nos. 2 thru 12, are 1/16" to 3/32" larger to allow for machining; Nos. 13 thru 16 are rough machined plus or minus 1/64".

No.	Shank		Opening, or Throat	Extreme Dimensions		Capacity Shanks Blank, Tons of 2000 lbs.			Weight Each, Lbs.	No.
	*Diam., Nominal Rough Size	Length		Length	Width	Safe Working Load	Average Load at Elastic Limit	Approx- imate Load Re- quired to Straighten out		
2	1/2	2	1	5	2 7/8	.5	.9	1.9	.59	2
3	9/16	2 1/4	1 1/16	5 1/2	3 1/8	.6	1.2	2.3	.78	3
4	5/8	2 1/2	1 1/8	6	3 1/2	.7	1.5	3	1.	4
5	3/4	2 3/4	1 1/4	6 3/4	3 7/8	1.2	2.5	5.7	1.6	5
6	7/8	3	1 3/8	7 1/2	4 3/8	1.7	3.5	7.	2.1	6
7	1	3 1/4	1 1/2	8 1/4	4 7/8	2.1	4.2	8.5	3.	7
8	1 1/8	3 1/2	1 3/4	9 1/4	5 5/8	2.5	5.4	10.	4.4	8
9	1 1/4	3 3/4	1 7/8	10 1/4	6 3/8	3.	6.2	13.	6.2	9
10	1 3/8	4	2 1/16	11	6 7/8	4.	8.	17.	8.	10
11	1 1/2	4 1/4	2 1/4	12	7 1/2	4.7	9.	19.	10.	11
12	1 5/8	4 1/2	2 1/2	13	8 1/4	5.5	11.	26.	13.3	12
13	1 3/4	†5	3	14 1/2	9 1/4	6.8	13.	32.	17.8	13
14	2	†5 1/2	3 3/8	16	11	8.	17.	35.	26.7	14
15	2 3/8	†6	4	17 7/8	13 1/2	11.	21.	48.	44.	15
†15A	2 3/8	†6	4	17 7/8	13 1/2	15.	25.	55.	46.	†15A
16	2 3/4	†7	4 1/2	21 1/2	15	20.	40.	80.	70.	16
†16A	2 3/4	†7	4 1/2	21 1/2	15	25.	50.	73.	†16A

♦ REGISTERED TRADE MARK

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WILLIAMS' ♦ "VULCAN"
DROP-FORGED HOIST HOOKS

The Hooks with the Orange Tip

EYE PATTERN—WELDLESS

(Continued from preceding page)

Use the Hook with the orange tip — no other standard line offers such assurance of safety and care in manufacture.

For Safety Chains on railroad cars, a Hook, approximately No. 27 in size and with eye at right angle, can be furnished to order in reasonable quantities; see small illustration. Full size drawing on request.

Tobin Bronze Hooks from standard or special dies to order in quantities; prices on application.

‡ 36A Hook is made from special alloy steel; others from carbon steel.



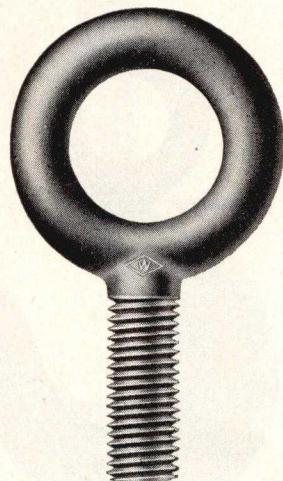
No.	Diameter of Eye		Opening, or Throat	Extreme Dimensions		Capacity, Tons of 2000 lbs.			Weight Each, Lbs.	No.
	Inside	Outside		Length	Width	Safe Working Load	Average Load at Elastic Limit	Approximate Load Required to Straighten out		
22	3/4	1 1/2	1	4 3/8	2 7/8	.5	.9	1.9	.53	22
23	7/8	1 3/4	1 1/16	4 7/8	3 1/8	.6	1.2	2.3	.75	23
24	1	2	1 1/8	5 3/8	3 1/2	.7	1.5	3.	1.1	24
25	1 1/8	2 1/4	1 1/4	6 3/16	3 7/8	1.2	2.5	5.7	1.5	25
26	1 1/4	2 1/2	1 3/8	6 7/8	4 3/8	1.7	3.5	7.	2.2	26
27	1 3/8	2 3/4	1 1/2	7 5/8	4 7/8	2.1	4.2	8.5	3.	27
28	1 1/2	3	1 3/4	8 9/16	5 5/8	2.5	5.4	10.	4.4	28
29	1 5/8	3 1/4	1 7/8	9 9/16	6 3/8	3.	6.2	13.	6.	29
30	1 3/4	3 1/2	2 1/16	10 3/8	6 7/8	4.	8.	17.	8.	30
31	2	4	2 1/4	11 1/2	7 1/2	4.7	9.	19.	10.3	31
32	2 3/8	4 5/8	2 1/2	13	8 1/4	5.5	11.	26.	14.	32
33	2 3/4	5 1/4	3	14 3/4	9 1/4	6.8	13.	32.	20.	33
34	3 1/8	6 1/8	3 3/8	16 3/4	11	8.	17.	35.	31.5	34
35	3 1/2	7	4	19 1/8	13 1/2	11.	21.	48.	51.7	35
36	4	8 1/2	4 1/2	22 3/4	15	20.	40.	80.	89.	36
‡36A	4	8 1/2	4 1/2	22 3/4	15	25.	50.	.....	87.	‡36A

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "VULCAN"
WELDLESS EYE BOLTS

PLAIN PATTERN

Threaded or Blank



These carbon steel Eye Bolts are specially heat-treated, after forging, to increase further their strength and toughness and reduce the liability of breakage.

To insure proper service at listed capacity, every "Vulcan" Eye Bolt, *after heat-treatment, and before threading* is proof-tested on a standard tension machine to fifty per cent beyond its "Safe Working Load."

Each Eye Bolt so tested is stamped O near its piece number, which appears in raised letters on the forging, and hence can be readily identified as "proof-tested."

U. S. Std. Threaded Eye Bolts of Standard length are in stock; threaded prices are for these with either U. S. or Whitworth Std. Threads; longer lengths and special threads extra.

Tobin Bronze Eye Bolts for marine work from standard or special dies to order in quantities; prices on request. Prices given for special Eye Bolts on receipt of drawings, or models and specifications.

(Continued on following page)

**When ordering, please state whether Threaded or Blank are desired;
Threaded will be supplied, unless otherwise specified.**

No.	Shank			Diameter Eye		Capacity Blanks; Tons of 2000 lbs.		Weight Each, Lbs.		No.
	Diam.; Nominal Rough Size; Blank	Standard		Inside	Outside	Safe Work- ing Load	Break- ing Strain, Approx.	Blank	Threaded	
		Lengths under Eye Blank and Threaded	Lengths available in Stock; Blank					Stand- ard Length	Standard Length	
3	3/8	1 1/4	4 1/2	1	1 21/32	.7	3.	.18	.17	3
4	7/16	1 3/8	4 1/2	1	3/32	1 27/32	4.	.26	.23	4
5	1/2	1 1/2	4 1/2	1	3/16	2 1/16	1.3	.35	.33	5
6	9/16	1 5/8	4 1/2	1	9/32	2 9/32	1.5	.53	.50	6
7	5/8	1 3/4	4 1/2	1	3/8	2 1/2	2.	.72	.68	7
8	3/4	2	5	1	1/2	2 13/16	3.	1.2	1.1	8
9	7/8	2 1/4	5	1	11/16	3 1/4	3.5	16.	1.6	9
10	1	2 1/2	5	1	13/16	3 9/16	4.	20.	2.2	10
11	1 1/8	2 3/4	5	2	4	5.	23.	3.2	3.	11
12	1 1/4	3	6	2	3/16	4 7/16	7.5	33.	4.5	12
14	1 1/2	3 1/2	6	2	1/2	5 3/16	9.	42.	7.2	14
15	1 3/4	3 3/4	6	2	7/8	6 1/16	11.	53.	11.6	15
16	2	4	6	3	1/4	6 7/8	13.	68.	16.1	16
17	2 1/2	5	6	4		8 9/16	16.	85.	33.	17

♦ REGISTERED TRADE MARK

1-52

DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' ♦ "VULCAN"

WELDLESS EYE BOLTS

SHOULDER PATTERN

Threaded or Blank

(Continued)

On standard length Threaded Eye Bolts of Shoulder Pattern the thread runs within $1/8"$ (No. 21) to $3/4"$ (No. 36) of shoulder, which is faced.

Prices for either Plain, or Shoulder Eye Bolts of "Extra Length" apply only to forgings which may be in stock at time ordered.

Price on special length Blank or Threaded Eye Bolts on application.

To determine List Price for Threaded Eye Bolts of other than standard length:—

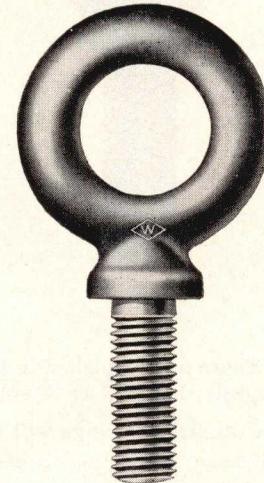
1. Determine price of Blank (see A, B and C in Price Sheet).
2. Add for threading (see D).
3. If quantity is less than 100 of same pattern and shank diameter, shorter or longer than standard, add \$3.60 NET for the lot to cover "set-up" charge.
Shorter lengths than standard take Standard Threaded List, plus "set-up" charge, if any.

Example:—50 No. 28—8" long, Threaded 3"

Blank—Std. Length 2"	(A)	\$.73
Extra to Max. 5"	(B) .....	.57
Additional 3" @ 28c	(C) .....	.84
Threading—3" @ 18c	(D) .....	.54

LIST PRICE, Each.....\$2.68

"Set-Up" NET charge, \$3.60 extra for the lot.



**When ordering, please state whether Threaded or Blank are desired;
Threaded will be supplied, unless otherwise specified.**

No.	Shank			Eye, Diameter		Capacity Blanks; Tons of 2000 lbs.		Weight Each, Lbs.		No.
	Diam.; Nominal Rough Size; Blank	Standard Lengths under Shoulder Blank and Threaded	Lengths available in Stock; Blank	Inside	Outside	Safe Work- ing Load	Break- ing Strain, Approx.	Blank	Threaded	
								Stand- ard Length	Standard Length	
21	1/4	1	3	3/4	1 3/16	.2	1.5	.05	.05	21
22	5/16	1 1/8	4	7/8	1 7/16	.4	2.	.11	.1	22
23	3/8	1 1/4	4 1/2	1	1 21/32	.7	3.	.21	.2	23
24	7/16	1 3/8	4 1/2	1 3/32	1 27/32	1.	4.	.28	.26	24
25	1/2	1 1/2	4 1/2	1 3/16	2 1/16	1.3	5.	.43	.4	25
26	9/16	1 5/8	4 1/2	1 9/32	2 9/32	1.5	6.	.58	.54	26
27	5/8	1 3/4	4 1/2	1 3/8	2 1/2	2.	8.	.77	.72	27
28	3/4	2	5	1 1/2	2 13/16	3.	12.	1.2	1.1	28
29	7/8	2 1/4	5	1 11/16	3 1/4	3.5	16.	1.9	1.8	29
30	1	2 1/2	5	1 13/16	3 9/16	4.	20.	2.6	2.4	30
31	1 1/8	2 3/4	5	2	4	5.	23.	3.7	3.5	31
32	1 1/4	3	6	2 3/16	4 7/16	7.5	33.	4.9	4.6	32
34	1 1/2	3 1/2	6	2 1/2	5 3/16	9.	42.	8.	7.5	34
35	1 3/4	3 3/4	6	2 7/8	6 1/16	11.	53.	13.3	12.5	35
36	2	4	6	3 1/4	6 7/8	13.	68.	19.2	18.	36

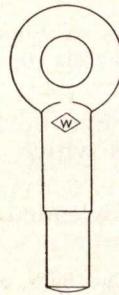
♦ REGISTERED TRADE MARK

WILLIAMS' MISCELLANEOUS EYE BOLTS

CARBON STEEL — WELDLESS



Type A



B 17, 25, 30, 35



Type B

These are furnished in two styles or types, A and B, and are carried in stock with shanks blank (not threaded), but will be supplied threaded to order at extra charge.

Full size drawings will be sent on request.

Type	No.	Shank		Diameter Eye		No.	Type
		Diameter	Length	Inside	Outside		
A	1	1/4	* 3/4	3/8	3/4	1	A
	10	3/8	3	3/4	1 3/8	10	
	12	3/8	3	3/8	1	12	
A	11	7/16	2 3/16	1 7/32	2 7/32	11	A
	13	7/16	2 3/4	5/8	1 3/8	13	
	14	15/32	1 5/8	1/2	1 1/4	14	
A	15	1/2	2	9/16	1 1/4	15	A
	16	1/2	3/4	1 3/8	2 3/8	16	
	17	1/2	4	1	1 3/4	17	
A	20	9/16	2	5/8	1 1/2	20	A
	25	5/8	1 3/4	7/8	1 5/8	25	
	26	5/8	*1 3/4	1 1/8	2	26	
A	40	13/16	3 1/4	3/4	2 1/8	40	A
	55	1	1 5/16	7/8	2 3/8	55	
	58	1	1/16	1 1/8	2 7/8	58	
B	1	1/4	1/2	3/8	3/4	1	B
	4	5/16	3	5/16	15/16	4	
	5	3/8	6	1/2	1 1/8	5	
B	10	7/16	1 1/8	1	3/4	10	B
	15	1/2	*1 1/2	13/16	1 13/16	15	
	16	1/2	3 1/4	7/16	1 7/16	16	
B	17	†1/2	1 3/4	1/2	1 1/8	17	B
	25	†5/8	2 3/8	1/2	1 1/4	25	
	26	5/8	2 3/4	11/16	1 11/16	26	
B	27	5/8	3/4	1 1/2	2 1/2	27	B
	30	†11/16	2 1/2	9/16	1 7/16	30	
	35	†3/4	2 3/4	5/8	1 5/8	35	
	45	7/8	4 1/8	1 1/8	2 3/8	45	
	50	15/16	*5	1 1/8	2 3/8	50	
	55	1	2 3/4	3/4	2	55	

† Shanks of B-17, 25, 30 and 35 are 7/16, 1/2, 9/16 and 5/8 inch in diameter for 3/4, 1, 1, and 1-1/8 inch from end respectively, as illustrated above.

* Also carried in stock in the following maximum lengths:—No. A-1, 3"; No. A-26, 4-1/2"; No. B-15, 4-1/2"; No. B-50, 8".

WILLIAMS' ♦ "VULCAN"
MACHINE HANDLE FORGINGS

UNFINISHED

With Smooth, Planished Surface

BALL PATTERN



Number	00	0	1	2	3	4	5	6	7
Extreme Length.....	2	2 1/4	2 3/4	3 1/4	3 7/8	4 1/2	5 1/8	5 7/8	6 5/8
Standard Length, Shank . . .	1/2	1/2	5/8	3/4	7/8	1	1 1/8	1 1/4	1 1/2
Maximum Length, Shank ..	11/16	3/4	1	1 1/8	1 1/4	1 1/2	1 7/8	2	2 1/8
Diameter, Shank.....	5/16	11/32	13/32	15/32	15/32	17/32	19/32	11/16	3/4
Weight Each, Lbs.....	.06	.09	.13	.22	.31	.37	.62	1.3	1.7

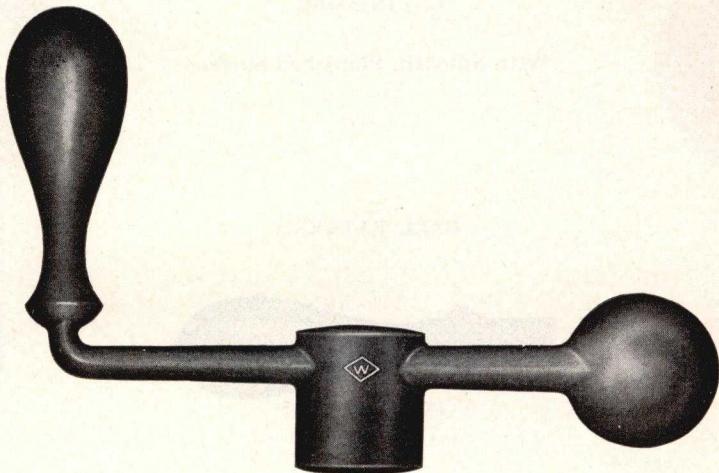
CONE PATTERN



Number	11	13	15	16
Extreme Length.....	3 1/2	4 1/2	5 1/2	6
Standard Length, Shank.....	1/2	3/4	7/8	1 1/8
Maximum Length, Shank.....	11/16	1 1/8	1 3/8	1 1/2
Diameter, Shank.....	3/8	7/16	1/2	9/16
Weight Each, Lbs.....	.22	.43	.75	1.1

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "VULCAN"
DROP-FORGED BALANCE HANDLES



Unfinished are plain forgings without any hole in hub.

Broached have holes finished, but are otherwise plain forgings.

Finished are broached, ground, polished, case-hardened all over and gray enameled.

The broached openings are made with corners slightly rounded to prevent breakage and a slight clearance is provided.

Holes are regularly finished to standard sizes given below but each forging admits of broaching to the maximum dimensions stated in table. Smaller openings than standard and special sizes can be broached to order. Handles can also be supplied with round holes in hub; details on application.

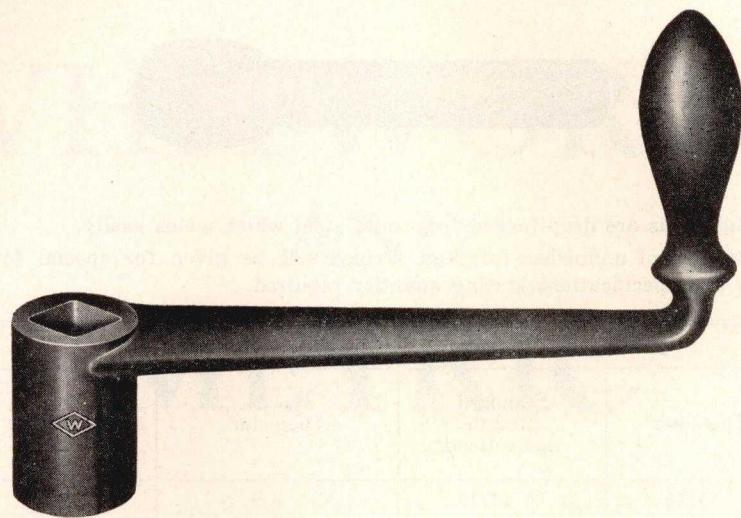
No.	Length			Hub		Square Hole, Size Broached		Ball, Diam.	Weight Each, Lbs.	No.
	C Hub to C Handle	Ex- treme	Handle Above Arm	Diam.	Length	Standard in Stock	Maxi- mum to Order			
512	1 1/4	3 5/16	1 15/16	7/8	3/4	7/16	1/2	7/8	.25	512
516	1 5/8	4	2 1/4	7/8	7/8	7/16	1/2	1 1/4	.56	516
‡520	2	5	2 5/8	1	15/16	1/2	5/8	1 1/4	.75	‡520
‡522	2 1/4	5 1/2	2 3/4	1 1/4	1	1/2	13/16	1 3/8	1.1	‡522
‡525	2 1/2	6	2 13/16	1 1/4	1 1/8	5/8	13/16	1 7/16	1.3	‡525
529	2 7/8	7	3 5/16	1 1/4	1 1/4	5/8	13/16	1 1/2	1.6	529
434	3 3/8	8	3 7/16	†1 1/2	7/8	5/8	3/4	1 3/4	1.3	434
439	3 7/8	9	3 1/2	†1 5/8	1 1/16	5/8	3/4	1 3/4	2.8	439

† Handle cone-shaped; see Crank Handle cut on opposite page.

† Hub is a sphere, flattened on top and bottom; full size drawing on request.

♦ REGISTERED TRADE MARK

WILLIAMS' ♦ "VULCAN"
DROP-FORGED CRANK HANDLES



Unfinished are plain forgings without hole in hub.

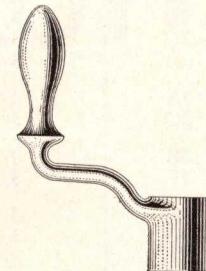
Broached have holes finished and hubs recessed or counter-bored in free end, but are otherwise plain forgings.

Finished are broached, counterbored in free end of hub, ground, polished, case-hardened all over and gray enameled.

The broached openings are made with corners slightly rounded to prevent breakage and a slight clearance is provided.

Holes are regularly finished to standard sizes given below, but each forging admits of broaching to the maximum dimensions stated. Smaller openings than standard and special sizes, running by sixteenths from $1/2$ to 1 inch inclusive, and thence by eighths, can be broached to order at extra cost.

Hubs of Broached, or Finished can be cut to shorter lengths and Handles will be offset (see small cut) if desired, at an additional charge.



No.	Length			Hub		Square Hole Size Broached		Weight Each, Lbs.	No.
	Center to Center	Ex-treme	Handle above Arm	Diam.	Length	Standard in Stock	Maximum to Order		
00	1 3/4	2 5/8	2 3/8	1	1 1/4	1/2	5/8	.38	00
0	2 1/4	3 1/8	2 1/2	1	1 1/4	1/2	5/8	.43	0
1	3	4	2 3/4	1 1/4	1 1/2	9/16	13/16	.78	1
2	3 1/2	4 1/2	2 7/8	1 1/16	1 5/16	1/2	5/8	.75	2
4	4	5 1/8	3 1/8	1 1/4	1 3/8	9/16	13/16	1.	4
6	5	6 1/8	3 1/8	1 1/4	1 13/16	5/8	13/16	1.1	6
8	6	7 1/8	3 1/8	1 1/4	1 15/16	11/16	13/16	1.2	8
10	7	8 1/4	3 3/8	1 3/8	2 1/16	3/4	7/8	1.6	10
12	8	9 3/8	3 5/8	1 9/16	2 7/16	7/8	1	2.4	12
14	9 1/8	10 1/2	3 3/4	1 1/2	2 1/2	7/8	1	2.5	14
16	10	11 1/2	4	1 3/4	3	1	1 1/8	3.2	16

♦ REGISTERED TRADE MARK

WILLIAMS' DROP-FORGED ROD ENDS**UNFINISHED**

These Rod or Stub Ends are drop-forged from mild steel which welds easily.

Dimensions show sizes of unfinished forgings. Prices will be given for special forms on receipt of models or drawings and specifications stating quantity required.

No.	Shank		Head		No.
	Diameter	Standard Length under Head	Diameter	Thickness	
0B	3/16	4 13/16	3/8	1/4	0B
1C	1/4	*5	5/8	1/4	1C
1D	1/4	*2 3/8	7/16	1/4	1D
2A	5/16	*3 3/4	3/4	7/16	2A
2B	5/16	3 1/8	3/4	5/16	2B
2C	5/16	5 3/4	3/4	3/8	2C
2D	5/16	1 1/4	13/16	3/8	2D
3A	3/8	*2	1	3/8	3A
3C	3/8	*3 1/2	13/16	3/8	3C
3E	3/8	3 1/8	5/8	5/8	3E
3F	3/8	1 1/8	3/4	3/8	3F
3G	3/8	1 7/16	5/8	3/8	3G
3H	3/8	1 5/8	3/4	3/8	3H
3J	3/8	3 1/16	7/8	3/8	3J
4B	7/16	*4 1/2	15/16	5/8	4B
5A	1/2	*4 3/8	(a) 1	1/2	5A
5C	1/2	3 1/16	7/8	7/16	5C
5D	1/2	*2 7/8	(b) 3/4	13/16	5D
5E	1/2	*2 1/8	1 1/16	9/16	5E
5F	1/2	2 1/16	13/16	11/32	5F
7A	5/8	*2 3/8	1 1/8	15/32	7A
7B	5/8	*4 7/8	1 1/4	19/32	7B
7D	5/8	*7 1/2	1 5/32	21/32	7D
7E	5/8	*5 7/8	(c) 1 1/8	1 1/16	7E
7F	5/8	*4 1/2	1 7/16	11/16	7F
7G	5/8	2 5/16	1	7/16	7G
9A	3/4	*3 7/8	1 3/4	5/8	9A
9B	3/4	*4	1 1/2	13/16	9B
9C	3/4	*4 3/8	1 1/8	3/4	9C
11A	7/8	*3 1/2	1 1/2	1 1/16	11A
11B	7/8	*4	2	15/16	11B
13B	1	*3 1/2	1 5/8	1 1/2	13B
13C	1	*3 1/2	1 15/32	1 1/8	13C
14A	1 1/16	*5 3/4	2 1/16	1 1/8	14A
15B	1 1/8	*6	2 1/4	1 1/4	15B
17A	1 1/4	*6	2 5/16	1 1/2	17A

*Can be furnished longer if desired.

Largest Diameter Head (a) 1-1/4"; (b) 1-1/8"; (c) 1-9/16".

DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

WHITWORTH
AND
METRIC

CARBON and ALLOY
WRENCHES

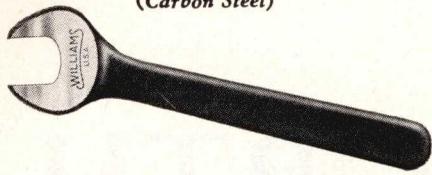
"SUPERSOCKETS"
AND
ATTACHMENTS

DROP-FORGINGS AND

WILLIAMS

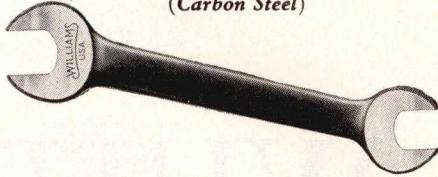
DROP-FORGED TOOLS

WILLIAMS'
◆ "SUPERIOR" ENGINEERS WRENCHES
15° Angle, Single Head
(Carbon Steel)



These wrenches are milled, surface and edges smooth, size stamped on head, hardened and black enameled (baked on)—heads bright.

WILLIAMS'
◆ "SUPERIOR" ENGINEERS WRENCHES
15° Angle, Double Head
(Carbon Steel)



These wrenches are milled, surface and edges smooth, size stamped on head, hardened and black enameled (baked on)—heads bright.

WHITWORTH

No.	For Whitworth Standard	For B. S. F.	Extreme Length Approx.	Net Wgt. Lbs. Approx.
W00	1/8	3/16	3 1/2	.07
W0	3/16	1/4	4	.08
W1	1/4	5/16	4 5/8	.13
W2	5/16	3/8	5 1/2	.20
W3	3/8	7/16	6 3/8	.33
W4	7/16	1/2	7 1/4	.42
W5	1/2	9/16	8 1/8	.61
W6	9/16	5/8	9 1/4	.91
W7	5/8	11/16	10 1/2	1.3
W8	3/4	7/8	12	2.1
W9	7/8	1	13 1/2	2.7
W10	1	1 1/8	15	3.5
W11	1 1/8	1 1/4	16 1/2	4.6
W12	1 1/4	1 3/8	18 1/4	5.8
W13	1 3/8	1 1/2	20	7.2
W14	1 1/2	1 5/8	22	10.

METRIC MEASURE

No.	Metric Openings m/m	Extreme Length, Approx.	Net Wgt., Lbs. Approx.
MS000	5	2 1/2	.03
MS000T	6	2 1/2	.03
M00T	7	3 1/2	.07
M00	8	3 1/2	.07
M0T	9	4	.08
M0	10	4	.08
M1T	11	4 5/8	.13
M1	12	4 5/8	.13
M2T	13	5 1/2	.20
M2	14	5 1/2	.20
M2U	15	5 1/2	.20
M3	16	6 3/8	.33
M3U	17	6 3/8	.33
M3T	18	6 3/8	.33
M4T	19	7 1/4	.42
M4	20	7 1/4	.42
M5T	21	8 1/8	.61
M5	22	8 1/8	.61
M6T	23	9 1/4	.91
M6U	24	9 1/4	.91
M6	25	9 1/4	.91
M7T	26	10 1/2	1.3
M7U	27	10 1/2	1.3
M7	28	10 1/2	1.3
M8U	29	12	2.1
M8	30	12	2.1
M8T	32	12	2.1
M9U	34	13 1/2	2.7
M9	35	13 1/2	2.7
M9V	36	13 1/2	2.7
M9T	38	13 1/2	2.7
M10	40	15	3.5
M10T	42	15	3.5
M11	45	16 1/2	4.6
M12	50	18 1/4	5.8

◆ REGISTERED TRADE MARK

WHITWORTH

No.	For Whitworth Standard	For B. S. F.	Extreme Length Approx.	Net Wgt. Lbs. Approx.
W21	1/8 & 3/16	3/16 & 1/4	4 1/8	.08
W22	1/8 & 1/4	3/16 & 5/16	4 1/4	.11
W23	3/16 & 1/4	1/4 & 5/16	4 1/2	.11
W24	3/16 & 5/16	1/4 & 3/8	5	.18
W25	1/4 & 5/16	5/16 & 3/8	5 3/4	.22
W26	1/4 & 3/8	5/16 & 7/16	6	.30
W27	5/16 & 3/8	3/8 & 7/16	6 3/4	.33
W28	5/16 & 7/16	3/8 & 1/2	7 1/4	.42
W29	3/8 & 7/16	7/16 & 1/2	7 7/8	.48
W30	3/8 & 1/2	7/16 & 9/16	8	.61
W31	7/16 & 1/2	1/2 & 9/16	9 1/8	.70
W32	7/16 & 9/16	1/2 & 5/8	10	.98
W33	9/16 & 1/2	9/16 & 5/8	10	.98
W34	1/2 & 5/8	9/16 & 11/16	11	1.3
W35	9/16 & 5/8	5/8 & 11/16	11	1.3
W36	9/16 & 3/4	5/8 & 7/8	12 3/8	2.
W37	5/8 & 3/4	11/16 & 7/8	12 3/8	2.
W38	5/8 & 7/8	11/16 & 1	13 1/2	2.9
W39	3/4 & 7/8	7/8 & 1	14	2.8
W40	3/4 & 1	7/8 & 1 1/8	15 1/2	3.7
W41	7/8 & 1	1 & 1 1/8	15 3/4	3.8
W42	7/8 & 1 1/8	1 & 1 1/4	17	5.8
W43	1 & 1 1/8	1 1/8 & 1 1/4	17	5.8
W44	1 & 1 1/4	1 1/8 & 1 3/8	19	7.3
W45	1 1/8 & 1 1/4	1 1/4 & 1 3/8	19	7.3

METRIC MEASURE

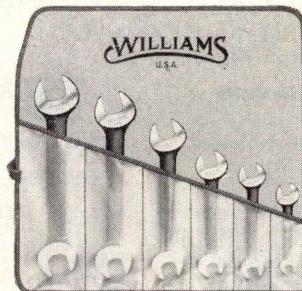
No.	Metric Openings m/m	Extreme Length, Approx.	Net Wgt., Lbs. Approx.
M21	6 & 8	4 1/8	.08
M21T	7 & 9	4 1/8	.08
M21U	8 & 10	4 1/8	.08
M22	9 & 11	4 1/4	.11
M23	10 & 12	4 1/2	.11
M23T	11 & 13	4 1/2	.11
M25T	12 & 13	5 3/4	.22
M25	12 & 14	5 3/4	.22
M25U	13 & 15	5 3/4	.22
M27	14 & 16	6 3/4	.33
M27T	15 & 16	6 3/4	.33
M27U	15 & 17	6 3/4	.33
M28	16 & 18	7 1/4	.42
M28T	17 & 19	7 1/4	.42
M29T	18 & 19	7 7/8	.48
M29	18 & 20	7 7/8	.48
M30	19 & 21	8	.61
M31	20 & 22	9 1/8	.70
M31T	21 & 23	9 1/8	.70
M32T	22 & 24	10	.98
M32	22 & 25	10	.98
M32U	23 & 25	10	.98
M34	23 & 27	11	1.3
M34T	24 & 26	11	1.3
M34U	25 & 27	11	1.3
M35	25 & 28	11	1.3
M34V	26 & 28	11	1.3
M35T	26 & 29	11	1.3
M36T	27 & 29	12 3/8	2.
M36	28 & 30	12 3/8	2.
M36U	29 & 32	12 3/8	2.
M37	30 & 32	12 3/8	2.
M39	32 & 35	14	2.8
M40	33 & 39	15 1/2	3.7
M41	38 & 40	15 3/4	3.8
M41T	38 & 42	15 3/4	3.8
M43	42 & 45	17	5.8
M44	46 & 50	19	7.3
M47	50 & 55	21	9.3

1-52

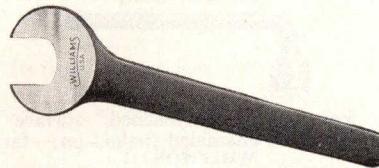
DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

SET No. W-25
WHITWORTHIn Leatherette Roll
In Cardboard Box
Total Net Weight, 3.1 lbs.CONTENTS
1 each Nos. W21, W25, W27, W29,
W31 and W33.

WILLIAMS'
 ♦ "SUPERIOR" CHECK NUT,
 or "THIN" WRENCHES
 15° Angle, Single Head
 (Carbon Steel)



This class of Wrench is guaranteed amply strong for its purpose, but is not designed for severe service.

WHITWORTH

No.	For Whitworth Standard	For B. S. F.	Extreme Length Approx.	Net Wgt. Lbs. Approx.
W601	1/4	5/16	4	.08
W602	5/16	3/8	4 1/2	.12
W603	3/8	7/16	5 1/8	.14
W604	7/16	1/2	5 7/8	.23
W605	1/2	9/16	6 5/8	.33
W607	5/8	11/16	8 1/2	.66
W608	3/4	7/8	10	1.1
W609	7/8	1	11 5/8	1.5
W610	1	1 1/8	13 1/4	2.5

METRIC MEASURE

No.	Metric Openings m/m	Extreme Length, Approx.	Net Wgt., Lbs. Approx.
M601	12	4	.08
M601T	13	4	.08
M602	14	4 1/2	.12
M602T	15	4 1/2	.12

WILLIAMS'
 ♦ "SUPERIOR" CHECK NUT,
 or "THIN" WRENCHES
 15° Angle, Double Head
 (Carbon Steel)



These wrenches are milled, surface and edges smooth, size stamped on head, hardened and black enameled (baked on)—heads bright.

WHITWORTH

No.	For Whitworth Standard	For B. S. F.	Extreme Length Approx.	Net Wgt. Lbs. Approx.
W623	3/16 & 1/4	1/4 & 5/16	4 5/8	.08
W624	3/16 & 5/16	1/4 & 3/8	4 3/4	.11
W625	1/4 & 5/16	5/16 & 3/8	4 3/4	.11
W626	1/4 & 3/8	5/16 & 7/16	6	.17
W627	5/16 & 3/8	3/8 & 7/16	6	.17
W628	5/16 & 7/16	3/8 & 1/2	6 3/4	.23
W629	3/8 & 7/16	7/16 & 1/2	6 3/4	.23
W630	3/8 & 1/2	7/16 & 9/16	7 1/2	.36
W631	7/16 & 1/2	1/2 & 9/16	7 1/2	.36
W632	7/16 & 9/16	1/2 & 5/8	8 3/4	.36
W634	1/2 & 5/8	9/16 & 11/16	8 7/8	.59
W635	9/16 & 5/8	5/8 & 11/16	10 1/2	.95
W637	5/8 & 3/4	11/16 & 7/8	10 1/2	.95
W639	3/4 & 7/8	7/8 & 1	12 1/2	1.7

METRIC MEASURE

No.	Metric Openings m/m	Extreme Length, Approx.	Net Wgt., Lbs. Approx.
M623	10 & 12	4 5/8	.08
M623T	12 & 14	4 5/8	.08
M623U	13 & 15	4 5/8	.08
M626	14 & 16	6	.21
M626T	16 & 18	6	.21
M629	18 & 20	6 3/4	.23
M628T	19 & 21	6 3/4	.23
M630	20 & 22	7 1/2	.36
M630T	21 & 23	7 1/2	.36
M630U	22 & 25	7 1/2	.36
M634	23 & 27	8 7/8	.59
M634T	24 & 26	8 7/8	.59
M635T	26 & 29	10 1/2	.95
M635	28 & 30	10 1/2	.95

♦ REGISTERED TRADE MARK

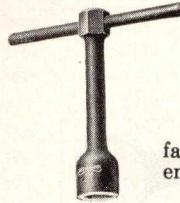
DROP-FORGINGS AND WILLIAMS DROP-FORGED TOOLS

♦“SUPERIOR” CONSTRUCTION WRENCHES
(Carbon Steel)
15° Angle



Wrenches are milled, hardened and shot-blasted; heads not bright. WHITWORTH

No.	For Whitworth Standard	For B. S. F.	Extreme Length Approx.	Net Wgt. Lbs. Approx.
W201	1/4	5/16	9 1/2	.27
W202	5/16	3/8	9 1/2	.27
W203	3/8	7/16	12	.53
W204	7/16	1/2	12	.53
W205	1/2	9/16	14 1/2	1
W207	5/8	11/16	17	1.7
W208	3/4	7/8	19	2.6
W209	7/8	1	21	3.7
W210	1	1 1/8	23	5.3
W211	1 1/8	1 1/4	25	7.3



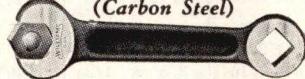
♦“SUPERIOR”
SOCKET WRENCHES
(Carbon Steel)

These wrenches are broached, surface smooth, hardened and black enameled (baked on)—face bright.

WHITWORTH

No.	For Whitworth Standard	For B. S. F.	Extreme Length Approx.	Net Wgt. Lbs. Approx.
W963A	3/16	1/4	4 7/8	.30
W964A	1/4	5/16	5 1/4	.31
W965A	5/16	3/8	5 3/4	.45
W967A	3/8	7/16	6 1/2	.92
W968A	7/16	1/2	7	1.1
W969A	1/2	9/16	7 3/8	1.3
W971A	5/8	11/16	8 1/4	1.9
W973A	3/4	7/8	9 1/8	2.9
W975A	7/8	1	10	4.2
W976A	1	1 1/8	10 3/8	5.3

♦“SUPERIOR” TOOL POST WRENCHES
For Nuts and Set Screws
(Carbon Steel)



Wrenches are milled, surface and edges smooth, hardened, and black enameled (baked on)—heads bright.

WHITWORTH

No.	Whitworth Standard		For B. S. F.		Extreme Length Approx.	Net Wgt. Lbs. Approx.
	Open	Closed	Open	Closed		
W563C	1/2	9/16	9/16	5/8	7	.84
W563D	1/2	5/8	9/16	11/16	7	.84
W564	5/8	5/8	11/16	11/16	7 1/2	1.1

♦“SUPERIOR” HEX-BOX WRENCHES
(Carbon Steel)
Regular Pattern—15° Angle



Wrenches are broached, surface and edges smooth, hardened, black enameled (baked on)—heads bright.

WHITWORTH

No.	For Whitworth Standard	For B. S. F.	Extreme Length Approx.	Net Wgt. Lbs. Approx.
W802	5/16	3/8	4 7/8	.17
W803	3/8	7/16	5 7/8	.25
W804	7/16	1/2	6 7/8	.38
W805	1/2	9/16	7 3/4	.52
W806	9/16	5/8	8 3/4	.70
W807	5/8	11/16	9 7/8	.95
W808	3/4	7/8	11 1/2	1.4
W809	7/8	1	13 3/8	2
W810	1	1 1/8	15 1/4	2.9

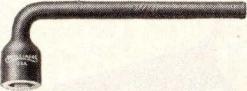
♦“SUPERIOR” STRUCTURAL WRENCHES
(Carbon Steel)
Straight Opening



Offset handle clears obstructions. For finish see opposite.
WHITWORTH

No.	For Whitworth Standard	For B. S. F.	Extreme Length Approx.	Net Wgt. Lbs. Approx.
W901	1/4	5/16	9 1/2	.33
W903	3/8	7/16	12	.63
W905	1/2	9/16	14 1/2	1.2
W906	9/16	5/8	14 1/2	1.2
W907	5/8	11/16	17	1.9
W908	3/4	7/8	19	3
W909	7/8	1	21	4
W910	1	1 1/8	23	5.3
W912	1 1/4	1 3/8	25	7.4

♦“SUPERIOR” OFFSET SOCKET WRENCHES
(Carbon Steel)

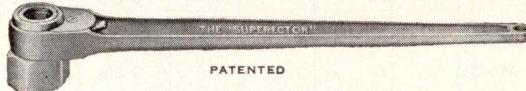


These wrenches are broached, surface smooth, hardened and black enameled (baked on)—face bright.

WHITWORTH

No.	For Whitworth Standard	For B. S. F.	Extreme Length Approx.	Net Wgt. Lbs. Approx.
W264A	1/4	5/16	5 1/8	.22
W265A	5/16	3/8	5 7/8	.36
W267A	3/8	7/16	6 3/4	.67
W268A	7/16	1/2	7 1/2	.92
W269A	1/2	9/16	8 3/8	1.1
W270A	9/16	5/8	9 1/8	1.4
W271A	5/8	11/16	10	1.8
W273A	3/4	7/8	11 5/8	2.7
W275A	7/8	1	13 1/4	4.1
W276A	1	1 1/8	14 7/8	5.1

WILLIAMS’ ♦“SUPERECTOR”
REVERSIBLE RATCHET WRENCHES
With Quadruple Pawls and Drop-Forged Handle



PATENTED

For use with sockets listed below.
Finished in baked gray enamel.

No.	Length From Center of Head	Net Wgt. Lbs. Approx.
E1-24	24	9.3
E1-36	36	12.8

WILLIAMS’

♦“SUPERECTOR” SOCKETS



Sockets have hole extending clear through their center so that nuts may be turned all the way down on any length of bolt. Finished in baked gray enamel.

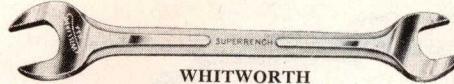
WHITWORTH

No.	For Whitworth Standard	For B. S. F.	Net Wgt. Lbs. Approx.
WE1-617	5/8	11/16	2.6
WE1-620	3/4	7/8	2.5
WE1-623	7/8	1	2.5
WE1-626	1	1 1/8	2.6
WE1-629	1 1/8	1 1/4	2.8
WE1-632	1 1/4	1 3/8	3.2
WE1-635	1 3/8	1 1/2	5.8

♦ REGISTERED TRADE MARK

DROP-FORGINGS AND WILLIAMS DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPERRENCHES"
Selected Alloy Steel
 NEW STREAMLINED DESIGN, 15° Angle—Double Head Open-End



WHITWORTH

No.	For Whitworth Standard	For B. S. F.	Extreme Length Approx.	Net Wgt. Lbs. Approx.
WA1021	1/8 & 3/16	3/16 & 1/4	4 11/16	.07
WA1022	1/8 & 1/4	3/16 & 5/16	4 7/8	.08
WA1023	3/16 & 1/4	1/4 & 5/16	5 1/8	.10
WA1025	1/4 & 5/16	5/16 & 3/8	6 1/4	.15
WA1027	5/16 & 3/8	3/8 & 7/16	7 1/2	.26
WA1028	5/16 & 7/16	3/8 & 1/2	8 1/4	.32
WA1029	3/8 & 7/16	7/16 & 1/2	9	.38
WA1030	3/8 & 1/2	7/16 & 9/16	9 3/4	.54
WA1031	7/16 & 1/2	1/2 & 9/16	10 1/2	.71
WA1033	1/2 & 9/16	9/16 & 5/8	11 3/8	.92
WA1034	1/2 & 5/8	9/16 & 11/16	11 3/8	.92
WA1037	5/8 & 3/4	11/16 & 7/8	13 1/4	1.4

Jaws are long, thin and pointed, but the strength is the greatest ever put in a thin wrench. Drop-forged from Selected Alloy Steel, heat-treated, chrome-plated.
METRIC MEASURE

No.	Metric Openings m/m	Extreme Length, Approx.	Net Wgt., Lbs. Approx.
MA1021	6 & 8	3 13/16	.03
MA1021T	8 & 10	4 1/4	.05
MA1023	10 & 12	5 1/8	.10
MA1025	12 & 14	6 1/4	.15
MA1027	14 & 16	6 7/8	.20
MA1028	16 & 18	8 1/4	.32
MA1028T	17 & 19	9	.38
MA1029	18 & 20	9 3/4	.54
MA1031	20 & 22	9 3/4	.54
MA1031T	21 & 23	10 1/2	.71
MA1032	22 & 25	11 3/8	.92
MA1033	24 & 26	11 3/8	.92
MA1035	25 & 28	12 1/4	1.1

SET No. WA-1025

WHITWORTH

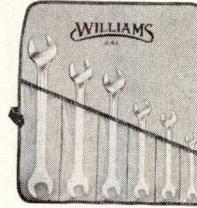
In Leatherette Roll

In Cardboard Box

Total Net Weight, 2.1 lbs.

CONTENTS

1 each Nos. WA1021, WA1025,
 WA1027, WA1029, WA1031 and
 WA1033.



SET No. MA-1025

METRIC MEASURE

In Leatherette Roll

In Cardboard Box

Total Net Weight, 1.9 lbs.

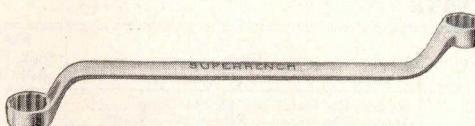
CONTENTS

1 each Nos. MA1021T, MA1025,
 MA1028, MA1028T, MA1031 and
 MA1031T.

WILLIAMS' 12-POINT-BOX ♦ "SUPERRENCHES"

Selected Alloy Steel

Double Offset Pattern



WHITWORTH

No.	For Whitworth Standard	For B. S. F.	Extreme Length Approx.	Net Wgt. Lbs. Approx.
W8723	1/8 & 3/16	3/16 & 1/4	7 3/4	.26
W8025	3/16 & 1/4	1/4 & 5/16	8 3/4	.43
W8727	1/4 & 5/16	5/16 & 3/8	9 3/4	.59
W8729	5/16 & 3/8	3/8 & 7/16	11	.84
W8029	3/8 & 7/16	7/16 & 1/2	11	.84
W8733	7/16 & 1/2	1/2 & 9/16	13 1/2	1.4
W8033C	1/2 & 9/16	9/16 & 5/8	14 1/2	1.1
W8034A	1/2 & 5/8	9/16 & 11/16	15 1/2	1.3
W8037	9/16 & 5/8	5/8 & 11/16	17	2.1
W8039	11/16 & 3/4	3/4 & 7/8	19	3.3
W8039A	5/8 & 3/4	11/16 & 7/8	19	3.3
W8039B	3/4 & 7/8	7/8 & 1	19	3.3
W8041	7/8 & 1	1 & 1 1/8	23	5.7
W8045	1 1/8 & 1 1/4	1 1/4 & 1 3/8	25	8.5
W8049	1 3/8 & 1 1/2	1 1/2 & 1 5/8	27	10.2

METRIC MEASURE

No.	Metric Openings m/m	Extreme Length, Approx.	Net Wgt., Lbs. Approx.
M8021	8 & 10	7 1/2	.18
M8723	9 & 11	7 3/4	.26
M8023	10 & 12	8 1/4	.43
M8025A	12 & 13	8 3/4	.43
M8725B	13 & 14	8 3/4	.43
M8025	13 & 15	8 3/4	.43
M8727	14 & 16	9 3/4	.59
M8727A	15 & 17	11	.59
M8729	16 & 18	11	.84
M8029	17 & 19	11	.84
M8729A	18 & 19	12 1/2	.84
M8731A	18 & 20	12 1/2	1.
M8731B	21 & 22	12 1/2	1.
M8033	23 & 24	13 1/2	1.1
M8033C	23 & 25	14 1/2	1.1
M8034	23 & 27	15 1/2	1.3
M8735A	25 & 28	17	2.1
M8735	26 & 29	17	2.1
M8039	30 & 32	19	3.3

SET No. W-8006

WHITWORTH

In Leatherette Roll

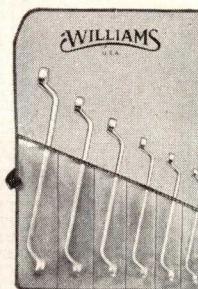
In Cardboard Box

Total Net Weight, 3.6 lbs.

CONTENTS

1 each Nos. W8723, W8025, W8727,
 W8029, W8733 and W8033C.

♦ REGISTERED TRADE MARK



SET No. M-8006

METRIC MEASURE

In Leatherette Roll

In Cardboard Box

Total Net Weight, 3.5 lbs.

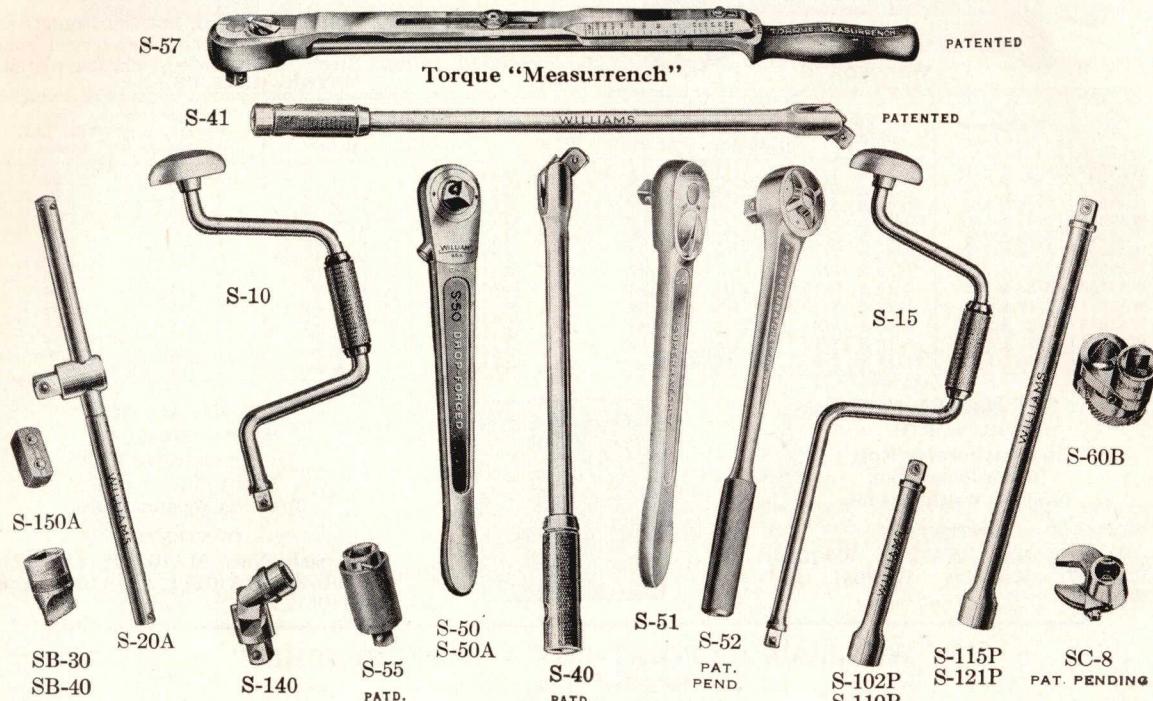
CONTENTS

1 each Nos. M8023, M8025, M8727,
 M8029, M8731A and M8033C.

DROP-FORGINGS AND WILLIAMS DROP-FORGED TOOLS

WILLIAMS' "SUPERSOCKET" WRENCHES
Selected Alloy Steel

Standard Pattern—1/2" Square Drive



HANDLES AND PARTS

No.	Piece	Net Wgt., Lbs. Approx.
SC-8	Adjust. Crowfoot Attach. 15/16" Capacity	.37
S-10	Speeder—12" long, revolving grips	1.8
S-15	Speeder—17-1/2" long, revolving grips ..	2
S-20A	Sliding T Handle—11" long .....	.96
SB-30	Screw Driver Attachment—7/64 x 15/16"	.14
SB-40	Screw Driver Attachment—3/32 x 1-1/4"	.16
S-40	Flex Handle—12" long, 7/16" crosshole ..	1.4
S-41	Flex Handle—17-1/4" long, 7/16" crosshole ..	1.9
S-42B	Sliding Bar—7/16 x 9" for S-40 and S-41 ..	.35
S-50	Ratchet—10" long with plug-connector ..	1.3
S-50A	Ratchet—10" long without plug-connector ..	1.3
S-51	Reversible Ratchet 10-1/2" long	1.4

No.	Piece	Net Wgt. Lbs. Approx.
S-52	Reversible Ratchet—11-1/4" long	1.2
S-55	Reversible Ratchet Adapter—2-9/16" .....	.5
S-57	Torque "Measurrench"—19-1/2" long. Indicates R.H. Torque. Has Torque indicating signal	
S-60B	Stud Remover 5/16 to 3/4" Capacity	3.7
S-102P	Extension Bar—2-1/2" long .....	.27
S-110P	Extension Bar—5-1/2" long .....	.53
S-115P	Extension Bar—10-1/2" long	1
S-121P	Extension Bar—20" long	2.1
S-140	Universal Joint—range approx. 140° .....	.34
S-150A	Ratchet Plug-Connector for S-50 .....	.08

"SUPERSOCKETS"

METRIC MEASURE

No.	Metric Openings m/m	Net Wgt., Lbs. Approx.
STM-1210	10	.11
STM-1211	11	.11
STM-1212	12	.11
STM-1213	13	.11
STM-1214	14	.11
STM-1215	15	.13
STM-1216	16	.13
STM-1217	17	.14
STM-1218	18	.17
STM-1219	19	.17
STM-1220	20	.19
STM-1221	21	.23
STM-1222	22	.27
STM-1223	23	.28
STM-1224	24	.28
STM-1225	25	.33
STM-1226	26	.47
STM-1227	27	.47
STM-1228	28	.48
STM-1229	29	.52
STM-1230	30	.59
STM-1231	31	.66
STM-1232	32	.69
STM-1233	33	.78
STM-1234	34	.81
STM-1235	35	.86
STM-1236	36	.92



Williams' Standard Sockets have thin walls for work in close places. They are accurately made from Selected Alloy Steel, heat-treated and chrome-plated.

WHITWORTH

No.	For Whitworth Standard	For B. S. F.	Net Wgt., Lbs. Approx.
STW-1206	3/16	1/4	.11
STW-1208	1/4	5/16	.13
STW-1210	5/16	3/8	.13
STW-1212	3/8	7/16	.16
STW-1214	7/16	1/2	.23
STW-1216	1/2	9/16	.28
STW-1218	9/16	5/8	.34
STW-1220	5/8	11/16	.48
STW-1222	11/16	3/4	.61
STW-1224	3/4	7/8	.75

♦ REGISTERED TRADE MARK

1-52

DROP-FORGINGS AND

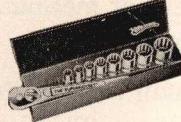
WILLIAMS

DROP-FORGED TOOLS

WILLIAMS' ♦ "SUPERSOCKET" WRENCH SETS
Selected Alloy Steel

Standard Pattern—1/2" Square Drive

WHITWORTH
SET No. WS-3



8 Sockets and 1 Attachment
Complete in Metal Case

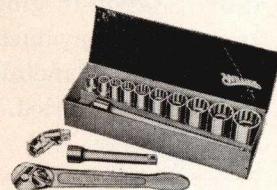
Total Net Weight Approx. 5.8 lbs.
Case—2-1/8 x 3 x 12-1/2"

CONTENTS

8 Standard "Supersockets"—Nos. STW-1210, STW-1212, STW-1214, STW-1216, STW-1218, STW-1220, STW-1222 and STW-1224.

1 S-51 Reversible Ratchet—10-1/2" long.

WHITWORTH
SETS Nos. WS-4 and WS-4B



Complete in Metal Cases

Case—2-1/8 x 3-3/4 x 12"

No. WS-4

10 Sockets and 4 Attachments
Total Net Weight
Approx. 7.9 lbs.

CONTENTS

10 Standard "Supersockets"—Nos. STW-1206, STW-1208, STW-1210, STW-1212, STW-1214, STW-1216, STW-1218, STW-1220, STW-1222 and STW-1224.

1 S-51 Reversible Ratchet—10-1/2" long.

*1 S-110P Extension Bar—5-1/2" long.

*1 S-115P Extension Bar—10-1/2" long.

*1 S-140 Universal Joint—range approx. 140°.

* Not included in Set No. WS-4B.

No. WS-4B

10 Sockets and 1 Attachment
Total Net Weight
Approx. 6.2 lbs.

CONTENTS

10 Standard "Supersockets"—Nos. STW-1206, STW-1208, STW-1210, STW-1212, STW-1214, STW-1216, STW-1218, STW-1220, STW-1222 and STW-1224.

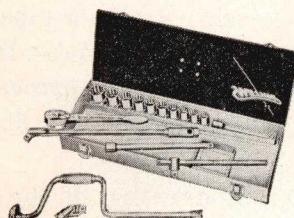
1 S-51 Reversible Ratchet—10-1/2" long.

*1 S-110P Extension Bar—5-1/2" long.

*1 S-115P Extension Bar—10-1/2" long.

*1 S-140 Universal Joint—range approx. 140°.

WHITWORTH
SET No. WS-5



10 Sockets and 7 Attachments
Complete in Metal Case

Total Net Weight, Approx. 16.7 lbs.
Case—2-1/4 x 7-1/2 x 20-3/4"

CONTENTS

10 Standard "Supersockets" Nos. STW-1206, STW-1208, STW-1210, STW-1212, STW-1214, STW-1216, STW-1218, STW-1220, STW-1222 and STW-1224.

1 S-15 Speeder—17-1/2" long.

1 S-20A Sliding T-Handle—11" long.

1 S-41 Flex Handle—17-1/4" long.

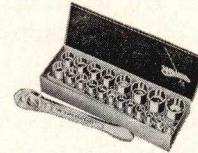
1 S-51 Reversible Ratchet—10-1/2" long.

1 S-110P Extension Bar—5-1/2" long.

1 S-115P Extension Bar—10-1/2" long.

1 S-140 Universal Joint—range approx. 140°.

METRIC MEASURE
SET No. MS-4



20 Sockets and 1 Attachment
Complete in Metal Case

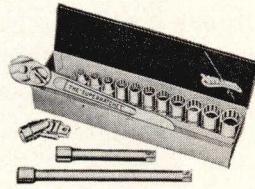
Total Net Weight, Approx. 7.8 lbs.
Case—2-1/8 x 3-3/4 x 12"

CONTENTS

20 Standard "Supersockets" — Nos. STM-1210 to STM-1229 inclusive.

1 S-51 Reversible Ratchet—10-1/2" long.

METRIC MEASURE
SETS Nos. MS-1 and MS-1B



Complete in Metal Cases

Case—2-1/8 x 3 x 12-1/2"

No. MS-1

11 Sockets and 4 Attachments
Total Net Weight
Approx. 6 lbs.

No. MS-1B

11 Sockets and 1 Attachment
Total Net Weight
Approx. 4.3 lbs.

CONTENTS

11 Standard "Supersokets" — Nos. STM-1210 to STM-1220 inclusive.

1 S-51 Reversible Ratchet—10-1/2" long.

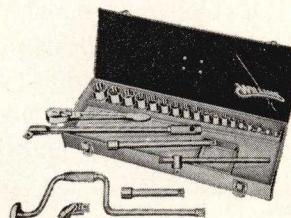
*1 S-110P Extension Bar—5-1/2" long.

*1 S-115P Extension Bar—10-1/2" long.

*1 S-140 Universal Joint—range approx. 140°.

* Not included in Set No. MS-1B.

METRIC MEASURE
SET No. MS-5



18 Sockets and 7 Attachments
Complete in Metal Case

Total Net Weight, Approx. 17.4 lbs.
Case—2-1/4 x 7-1/2 x 20-3/4"

CONTENTS

18 Standard "Supersockets" — Nos. STM-1210 to STM-1227 inclusive.

1 S-15 Speeder—17-1/2" long.

1 S-20A Sliding T-Handle—11" long.

1 S-41 Flex Handle—17-1/4" long.

1 S-51 Reversible Ratchet—10-1/2" long.

1 S-110P Extension Bar—5-1/2" long.

1 S-115P Extension Bar—10-1/2" long.

1 S-140 Universal Joint—range approx. 140°.

DROP-FORGINGS TO ORDER

Drop-forgings are used in vast quantities for a wide variety of mechanical purposes. They are made of steel, bronze, copper, iron and many other metals.

Their quality depends upon the material and the care and skill used in their manufacture. Our Chemical Laboratory checks all material as received; our Physical Laboratory tests forgings while in process and upon completion; our skill has been developed by half-a-century's experience in producing our standard stock tools and innumerable special designs to order.

MATERIAL

The material usually employed in making drop-forgings is bar steel. By carrying thousands of tons of assorted grades, shapes and sizes, many orders for drop-forgings can be completed without waiting to obtain the material. This is often a great convenience to our customers, particularly in the case of new dies, where the correct size of metal required cannot always be definitely determined until the tools are completed and tried.

DIES

Our facilities for sinking drop-forging dies, from the smallest, weighing only a few pounds, to massive blocks of several tons weight each, are unexcelled. Charges, when made for the use of dies, include but a portion of their cost and do not convey the right of removal from our works. We assume the risk and expense of their breakage and maintenance; the customer controls their use, as we will not make forgings from them without his written authority.

ESTIMATES

Dies are made to conform to a drawing; they usually differ from the finished part by the addition of the stock for removal in finishing and by the necessary draft, or taper, to permit drawing the forgings from them. Draft is seldom less than seven degrees—frequently it is more. Before sinking dies, we always submit to the customer for approval, a blue print showing the addition of the stock to be removed in finishing and the draft, with such other modifications as may be necessary.

When estimates are desired, therefore, send us a model, or drawing, of the part and state whether it shows "forging size" or "finished size," the quantity of forgings wanted and the material of which they are to be made. If the model, or drawings shows "finished size," tell us what surfaces are to be finished. We usually add at least $1/32$ inch on each surface to be machined. On large forgings we add $1/16$ to $1/8$ inch; on small pieces, requiring only grinding or polishing, $1/100$ inch is allowed.

The price of drop-forgings is largely affected by the quantity made with one setting of the tools; it costs as much to set dies for 100 as for 1000 pieces, and the forging work is also more costly per unit in small lots. Prices for drop-forgings vary with the nature of the work, the material used, the heat treatment if any, and the quantity taken at one time.

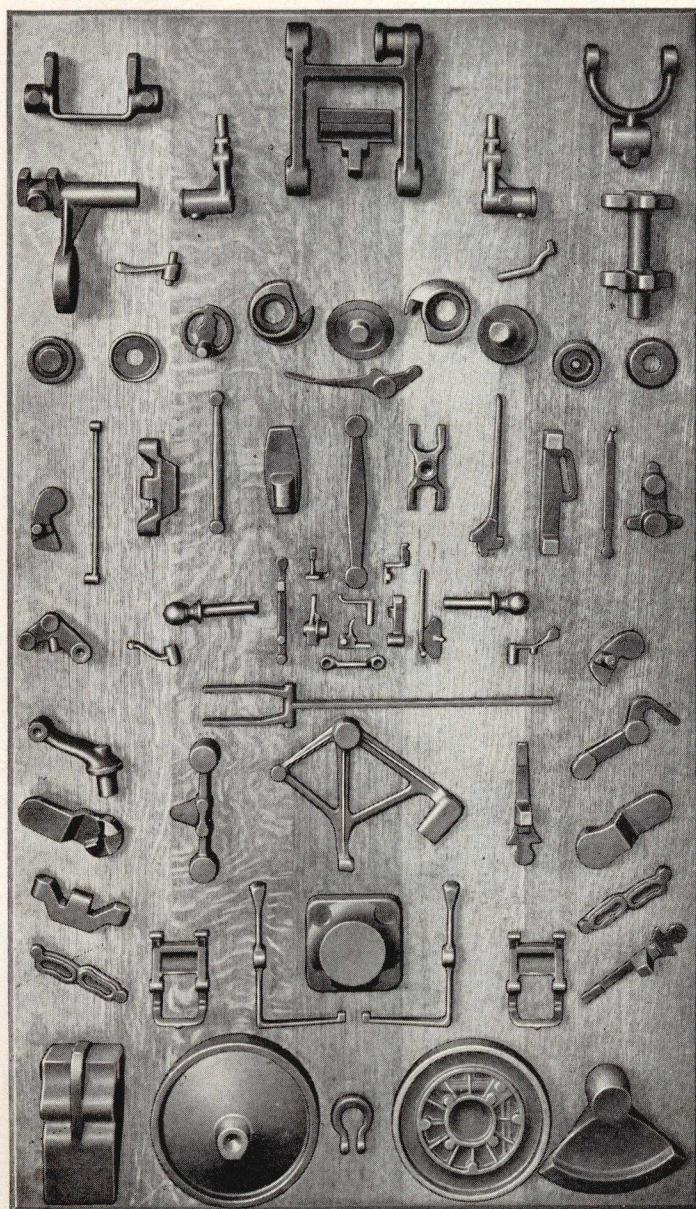
DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

DROP-FORGINGS TO ORDER

Illustrations of Drop-forgings made to order; not for sale from stock



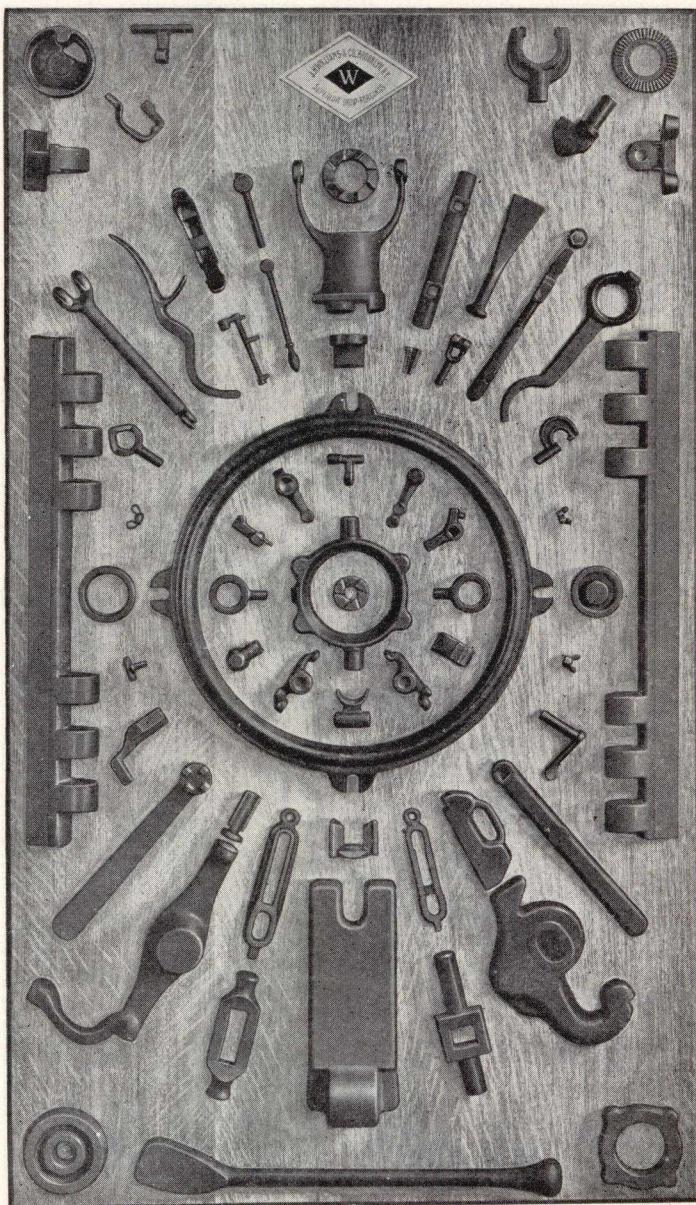
DROP-FORGINGS AND

WILLIAMS

DROP-FORGED TOOLS

DROP-FORGINGS TO ORDER

Illustrations of Drop-forgings made to order; not for sale from stock



WILLIAMS

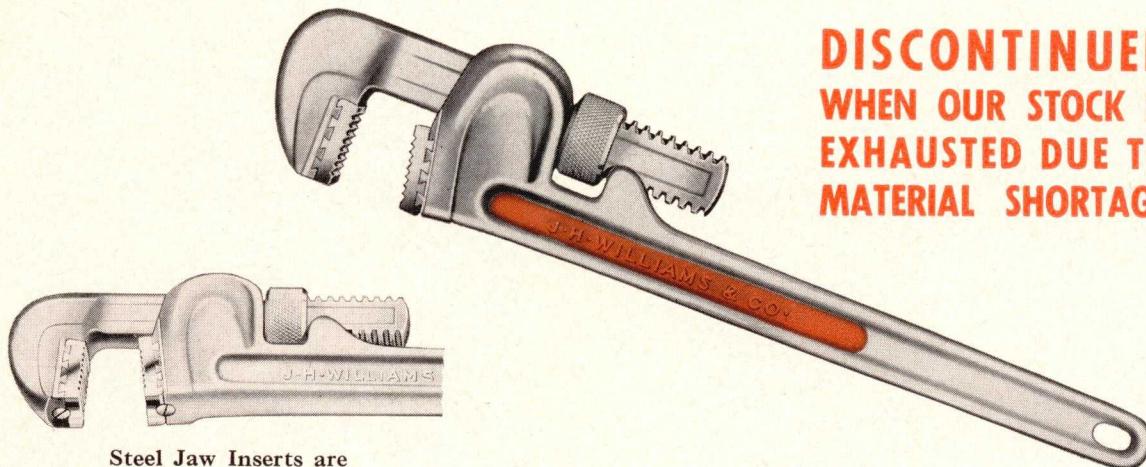
INDUSTRIAL

CATALOG SUPPLEMENT

No. 1

WILLIAMS' ALUMINUM PIPE WRENCHES

PATENT PENDING



Steel Jaw Inserts are
Replaceable and Interchangeable

Williams Aluminum Pipe Wrenches are fully drop-forged from special high tensile aluminum alloy carefully heat-treated for maximum strength and toughness to exceed the physical requirements of Federal Specification GGG-W-651a for "Heavy Duty Pipe Wrenches Type II".

Their strength and long-wearing qualities are comparable with heavier iron or steel wrenches. They will withstand the abuse and severe usage, associated with this type of wrench, over years of service.

Intense research and design effort have produced unusual balance and stamina. Weight has been reduced nearly 50%. The result is greater handling ease and less worker fatigue.

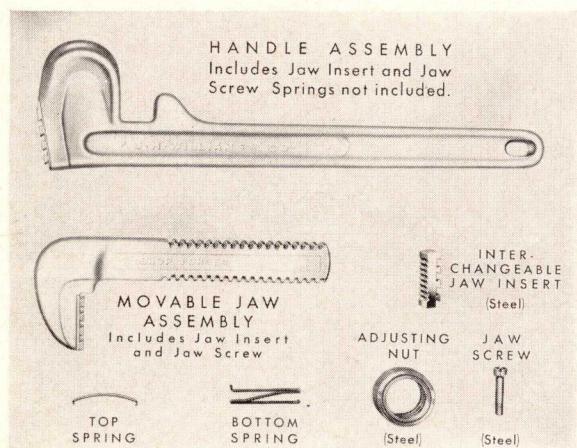
Replaceable alloy steel jaw inserts are interchangeable. The same insert fits handle and/or movable jaw. Multiple dove-tail design and retaining screw assure easy assembly and firm anchorage. Inserts have rust resistant finish.

Steel Adjusting Nut is case-hardened, knurled for easy adjustment and has rust resistant finish.

Movable Jaw is suspended between two springs of unique design. Gripping action is immediate and positive.

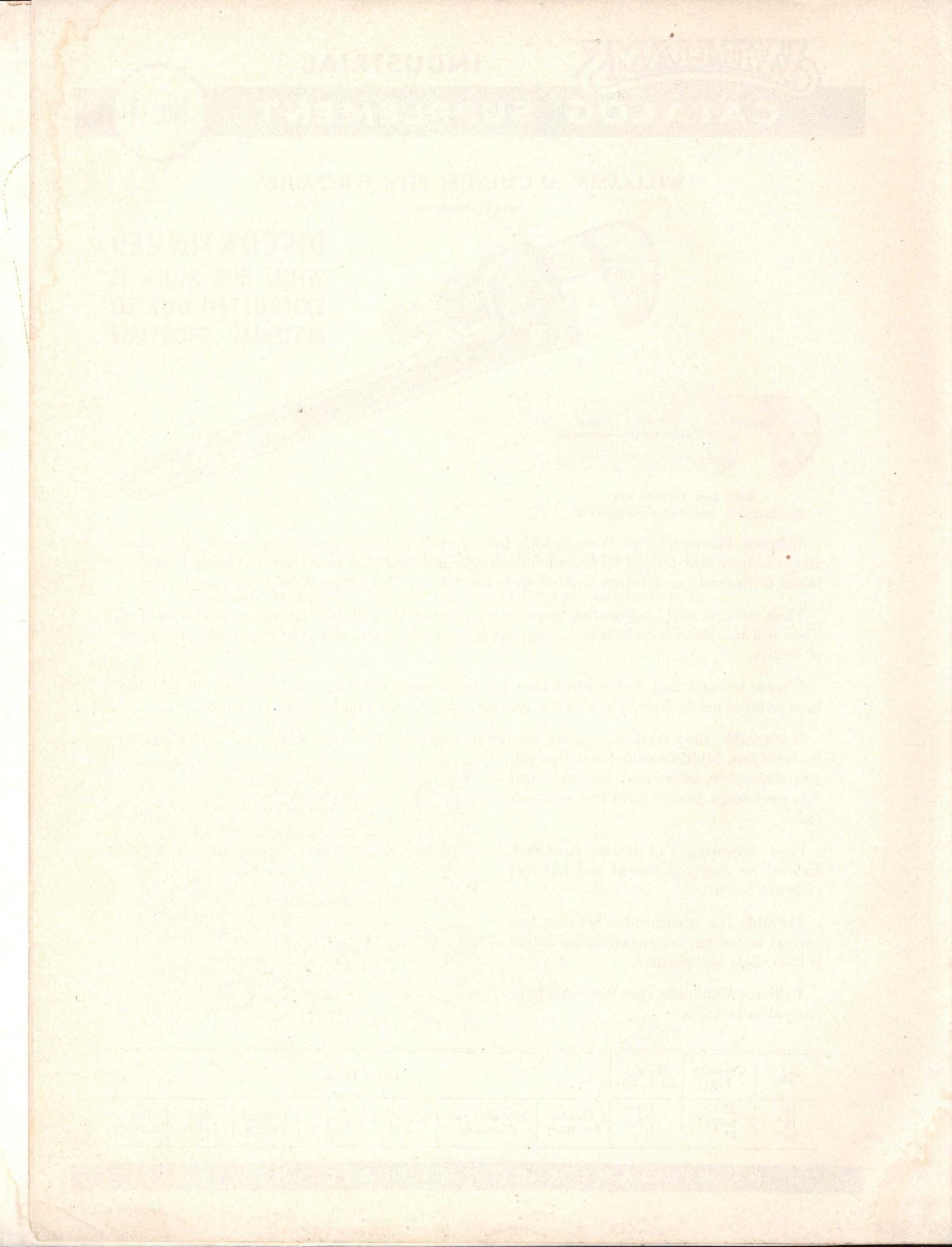
Williams Aluminum Pipe Wrenches have natural satin finish.

**DISCONTINUED
WHEN OUR STOCK IS
EXHAUSTED DUE TO
MATERIAL SHORTAGE**

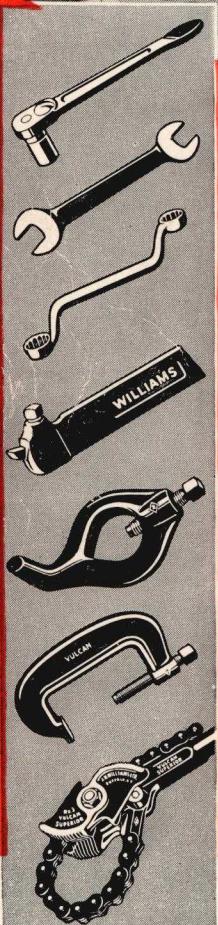
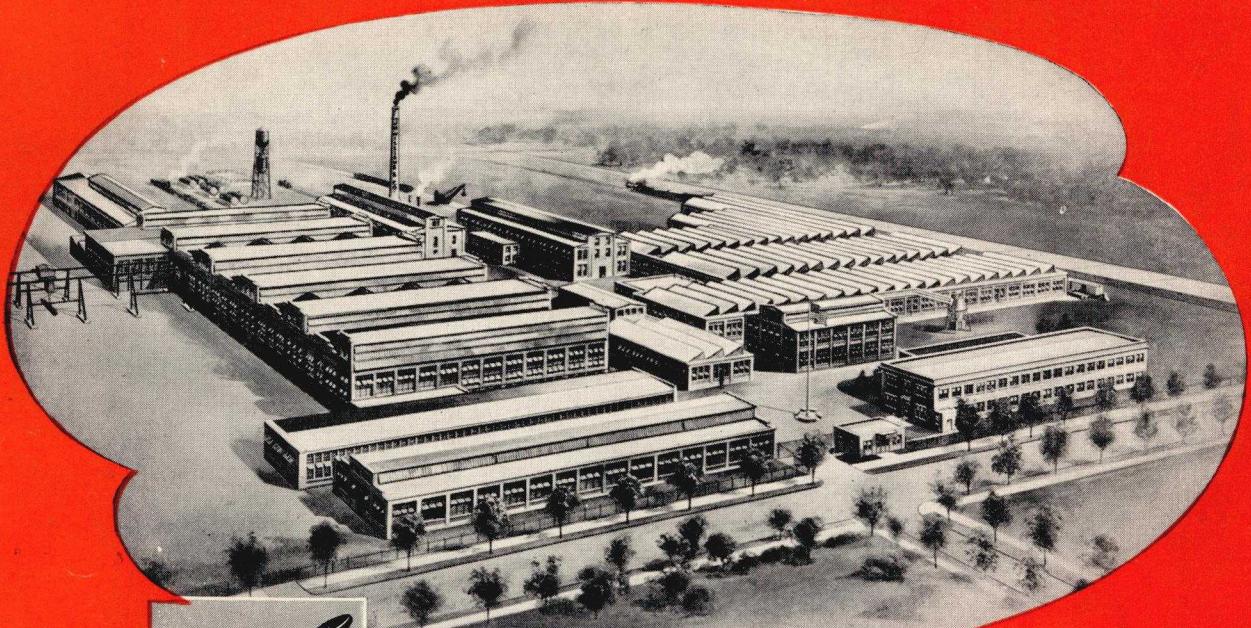


Size	Capacity Pipe	Weight Each, Lbs.	Extra Parts					
			Handle Assembly	Movable Jaw Assembly	Adjusting Nut	Top Spring	Bottom Spring	Jaw Insert
14"	2"	1.6						
18"	2-1/2"	2.5						
24"	3"	4.						

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